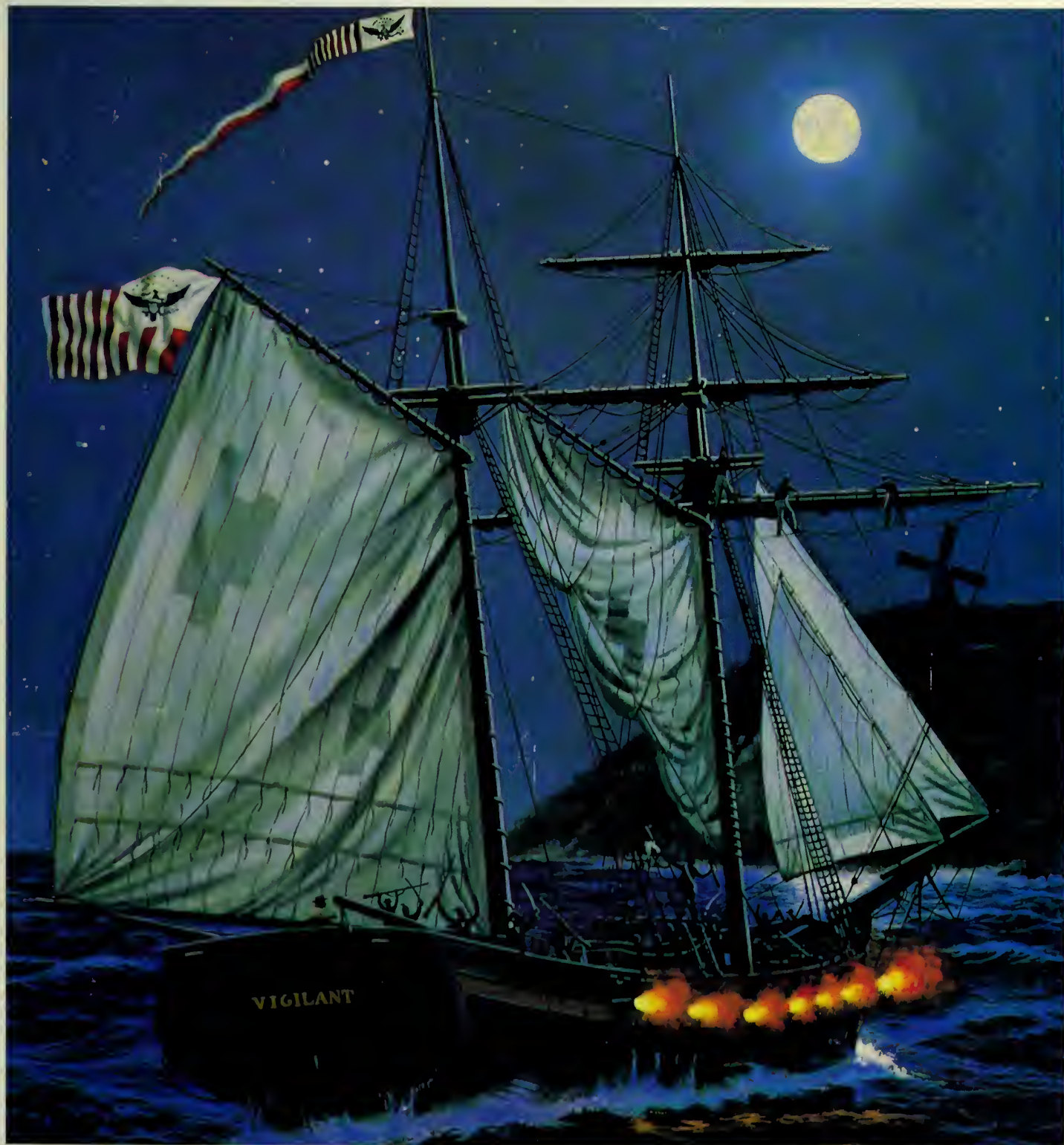


TD 5.56:
990



U.S. DEPARTMENT OF TRANSPORTATION UNITED STATES COAST GUARD ELEVENTH COAST GUARD DISTRICT 1990 SPECIAL NOTICE TO MARINERS



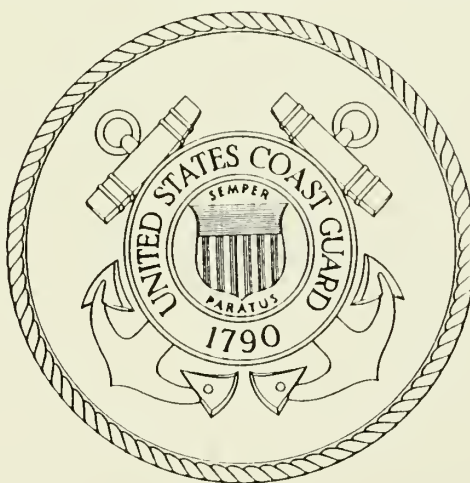
I wish to extend my greetings to the maritime community and invite your attention to our 1990 Special Notice to Mariners. This Special Notice is an annual publication that contains important information for mariners transiting the waterways within the Eleventh Coast Guard District. The district waterways include the ocean area from the California–Oregon State Line to the border between Guatemala and Mexico on the Pacific Coast; the Colorado River from the Mexican Border to and including Lake Mead, Lake Powell to Cataract Canyon, Utah and from below Green River, Utah to Castle Creek, Utah.

Comments concerning this Special Notice to Mariners should be addressed to Commander (oan), Eleventh Coast Guard District, 400 Oceangate, Long Beach, California 90822–5399, (213) 499–5410.

I hope you enjoy the Special Notice to Mariners and that you will use it for your own boating safety. May you have a pleasant and safe boating season.

J. W. Kime

J. W. KIME
Rear Admiral, U.S. Coast Guard
Commander, Eleventh Coast Guard District



COVER PHOTO

The Revenue Cutter Vigilant captures the British privateer Dart off Block Island in 1813. Actions such as Vigilant's capture carried on the cutter service's military activities throughout the War of 1812 and helped establish the traditions of today's Coast Guard.

"The Defeat of the Privateer Dart" was painted for the Coast Guard by artist Dean Ellis.

BACK COVER PHOTO

San Diego Bay Channel Lighted Buoy 19... on station and watching properly.
Submitted by FN Jeff Simmons of Coast Guard Station San Diego.

Inside Back Cover (perforated for easy removal):

U.S. Aids To Navigation System as seen from seaward.

TABLE OF CONTENTS

The University of Illinois
JUL 23 1990
University of Illinois
at Urbana-Champaign

CHAPTER I EMERGENCY PROCEDURES

The Distress Call	1
Proper Use of Radiotelephone Distress, Urgent and Safety Calls	1
Radiotelephone Distress Calls	1
Radiotelegraph Distress Calls	1
Radiotelephone (Voice) Message	1
If Aboard A Vessel In Distress	1
If Observing Another Vessel in Distress.....	2
International Distress Signals	2
Visual Distress Signals Requirements	2
Visual Distress Signal (VDS)	3
USCG Approved Visual Distress Signals	3
Selecting a Visual Distress Signal	3
Emergency Position Indicating Beacons (EPIRBS)	4, 5
The Coast Guard Needs Your Help	5
Search and Rescue Operations	5
Procedures and Signals Between Aircraft and Surface Craft	5
Request For Medical Advice and Medical Evacuation Information	5, 6
Helicopter Hoisting Procedures	6, 7
Coast Guard Drop Pump Procedures	7
Coast Guard Maritime Search and Rescue (SAR) Assistance Policy	7, 8
Coast Guard Towing Procedure	8
Ship Abandonment And Hypothermia	8, 9
Survival Suits	9
Automated Mutual-Assistance Vessel Rescue (AMVER).....	10

CHAPTER II COMMUNICATIONS

Communications with the Coast Guard on VHF-FM and HF (SSB).....	11
High Frequency Information	11
Communications and Information on Channel 16 (1568 MHz)	11
Communications on Channel 13 (15665 MHz)	11
Marine Radio Telephone Users Handbook	12
Frequency List.....	13, 14, 15
Broadcast Notice to Mariners	15
Coast Guard Marine Safety Broadcasts	15, 16
Scheduled Marine Broadcasts	16
Navigational Warning System (NAVTEX)	16, 17
Marine Information Broadcast Schedule	18
Continuous Weather Information VHF-FM.....	18
National Weather Service Transmitting Stations	18
VHF-FM Public Correspondence Stations.....	19
High Seas Weather Facsimile Broadcast Schedule and Frequencies	19

CHAPTER III VESSEL TRAFFIC SAFETY

Traffic Separation Scheme (TSS)	20
Los Angeles/Long Beach / Santa Barbara TSS	20
Offshore San Francisco Bay TSS.....	20
Inshore San Francisco Bay TSS	20
Los Angeles/Long Beach Vessel Traffic Information	21
Regulated Navigation Area, San Pedro Bay	21, 22
Point Arguello Ship Traffic Warning System	22
San Francisco Vessel Traffic Service	22, 23
Anchoring in San Francisco Bay	23
Offshore Vessel Movement Reporting System (OVMRS)	23, 24
Responsibilities of Deep Draft Vessels in OVMRS	24
Responsibilities of All Vessels in OVMRS	24
Rules of the Road, Narrow Channels	25
Narrow Channels in San Francisco Bay	26
Rules of the Road Enforcement	26

CHAPTER IV AIDS TO NAVIGATION

Cautionary Information Regarding Aids to Navigation	27
Reporting Dangers to Navigation	27
Required Reporting Damages to US Aids to Navigation	27, 28
Vandalism of Aids to Navigation.....	28
Private Aids To Navigation.....	28
Radiobeacons	28, 29
Sequenced Radiobeacons	29
RACONS.....	29
Long Range Navigation (LORAN).....	30
Loran-C Chains.....	30
Loran-C Receivers.....	30
Loran-C Receivers and Television Interference.....	31
Loran-C Handbooks.....	31
Omega Navigation	31
Omega Receivers	31
Omega Users Guide	31
Global Positioning System (GPS).....	31, 32

CHAPTER V COMMON CAUTIONARY SITUATIONS

Military Operations	33, 34, 35,
Mineclearance Operations	36
Submarine Operations.....	36
Geophysical Surveying Operations.....	36
Oil Drilling Structures and Vessels.....	37, 38
Marine Construction Sites.....	38
Pipeline Laybarges and Jetbarges	38
United States Submarine Cable Act.....	38, 39
Danger from Unlabeled Drums	39
Seaplane Operations.....	39
Cable Ferries	39, 40
Alpha Flag.....	40
Diver Flag	40
Marine Sanctuaries.....	40, 41
Flood Warnings.....	41
Harbor Conditions	41

CHAPTER VI BOATING SAFETY

Boating Safety Standards and Safe Boating Classes	42
Coast Guard Boating Safety Hotline.....	42
Choosing the Right Boat	42
Courtesy Marine Examination (CME).....	42, 43
Manufacturing Standards	43, 44
Boating Accident Reporting.....	44
Float Plans	44
Loading Your Boat.....	45
Notice To Sponsors Of Marine Events	45
Vessel Numbering Requirements.....	46
Personnel Flotation Devices (PFD).....	46, 47
Federal Marine Sanitation Device Regulations	47
Voluntary Standards For Uninspected Fishing Vessels	48, 49
The Three R's Of Bareboat Chartering	49, 50, 51, 52
High Intensity Deck Lights	52
Pacific Ocean Whale Watching	52

CHAPTER VII LAW ENFORCEMENT

U S Coast Guard Law Enforcement.....	53
U S Coast Guard Boarding Policy	53, 54
Zero Tolerance Policy	54
Foreign Fishery Activities.....	54, 55
Expansion of United States Territorial Seas	55
Smuggling	55
Coast Guard Policy on Stolen Boats	55, 56
Highjacking Danger	56
Reporting of Discharge of Oil or Hazardous Substances	56
Clean up of Oil Discharge.....	56
Clean Water Act.....	56, 57
The Refuse Act of 1899	57
MARPOL 73/78.....	57, 58
CERCLA	58
SARA	58
Drug and Alcohol Testing of Maritime Personnel.....	59
Operating a Vessel While Intoxicated.....	60, 61

CHAPTER VIII CHARTS, PUBLICATIONS AND TABLES

Coast Guard Local and Broadcast Notice to Mariners	62
Pacific Area Local Notice To Mariners	62, 63
Defense Mapping Agency (DMA).....	63
DMA Weekly Notice to Mariners.....	63
DMA Summary of Corrections.....	63
How to Order DMA Publications	63, 64
Automated Notice To Mariners	64
National Ocean Service Coast Pilots	64
Tide Tables.....	64
Tidal Current Tables.....	64, 65
Tidal Current Charts.....	65
Tidal Current Diagrams	65
How to Order National Ocean Service Charts and Publications	65
Rules of the Road Publication.....	65
Corrections to Nautical Charts	66
Nautical Chart Symbols and Abbreviations.....	66, 67
Implementation of North Datum 1983 (NAD 83)	67, 68, 69
Nautical Charts Converted to NAD 83 (NAD 83).....	69

CHAPTER IX BRIDGES

Bridge Administration.....	70
Bridge Administration, Civil Penalties	70
California Drawbridge Operations.....	70
Proper Bridge Repair	70
Signals Between Vessels and Drawbridges	70
Drawbridge Regulations	70, 71
Bridge Clearances	71
Bridge Lighting And Other Signals	71
Bridge Permit Application Procedures	71
Radiotelephone Procedures for Drawbridges	71, 72
Radiotelephones on Drawbridges in California	72, 73

Encl: (1) Listing of Authorized Chart Sales Agents
Encl: (2) Advance Notice Telephone Numbers and Regulations
for Northern California Drawbridges



Digitized by the Internet Archive
in 2013

<http://archive.org/details/eleventhcoastgua1990unit>

CHAPTER 1

EMERGENCY PROCEDURES

THE DISTRESS CALL

The Distress Call has absolute priority over all other transmissions and need not be addressed to any particular station. Any mariner hearing a distress call shall immediately cease all other transmissions capable of interfering with the distress message and shall continue to listen on the frequency on which the call was heard.

If your vessel is in distress and abandonment is necessary, the radio transmitter should be set for continuous emission to provide rescue vessels and aircraft with a homing signal.

PROPER • USE OF RADIOTELEPHONE DISTRESS, URGENT, AND SAFETY CALLS

Several instances have been reported of vessels calling **MAYDAY** to report they were out of gas, lost, having engine troubles, etc...and, in each case, when questioned, they advised they were in no immediate danger. The use of **MAYDAY** in this fashion is prohibited. It tends to nullify the importance of this signal, and is in violation of Federal Communications Commission (FCC) Regulations. In the interest of maritime safety it is imperative that all mariners familiarize themselves with proper use of radiotelephone signals authorized for the different situations they might encounter.

The following is taken from FCC Regulations as to the proper use of the Distress, Urgent, and Safety signals by mobile stations.

RADIOTELEPHONE DISTRESS CALLS

The radiotelephone Distress Signal consists of the word **MAYDAY** spoken three times. This signal indicates that a mobile station is threatened by grave and imminent danger and requests immediate assistance.

RADIOTELEPHONE URGENT CALLS

The radiotelephone Urgent Signal consists of three repetitions of the word **PAN-PAN** (rhymes with **DAWN**). The signal indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or the safety of a person.

RADIOTELEPHONE SAFETY CALLS

The radiotelephone Safety Signal consists of the word **SECURITE** (pronounced **SECURITAY**) spoken three times. This signal indicates that the station is about to transmit a message concerning the safety of

navigation or giving important weather warnings. The safety call is transmitted on 156.8 MHz (channel 16) or 2182 kHz together with a request to shift to a working frequency where the safety message will be given.

RADIOTELEGRAPH DISTRESS SIGNAL

- 1) Trip the radiotelegraph alarm signal (if available).
- 2) Set equipment to frequency 500 kHz and transmit the morse code "SOS", followed by long dash or steady key (5-10 seconds), for direction finding.

Since radiotelegraph communications require familiarity with morse code, the most that can be accomplished would be to enable other ships or shore stations to take a radio bearing on the vessel in distress.

Simple to follow instructions for the operation of auto alarms, radiotelephone and radiotelegraph equipment should be conspicuously placed in the radio rooms of all ships. Procedures outlined here are purposely brief. Complete information on emergency radio procedures is contained in chapter 5 of the Radio Navigational Aids (Pub 117A and B).

RADIOTELEPHONE (VOICE) MESSAGE

Periodically, mariners in distress or having knowledge of another vessel in distress do not give all information required by the International Radio Regulations and by the Federal Communications Commission. Use of proper format is vital in the transmission of marine distress messages. Clarity and brevity are required. The Coast Guard strongly recommends that the distress message format and transmission procedures be learned by all mariners.

If in **DISTRESS** or observing a **DISTRESS** (i.e. when threatened by grave and imminent danger) the Radiotelephone Alarm Signal (if available) should be transmitted for approximately one minute on either 2182 kHz or 156.8 MHz (channel 16) prior to the **DISTRESS CALL**. The Radiotelephone Alarm Signal consists of two audible tones, of different pitches, transmitted alternately. Its purpose is to attract attention of persons on watch and shall only be used to announce that a distress call or message is about to follow. Then speak slowly and clearly: **MAYDAY MAYDAY MAYDAY THIS IS** (your vessels call sign and name repeated **THREE** times).

IF ABOARD A VESSEL IN DISTRESS

transmit the distress call on 2182 kHz or 156.8 MHz (channel 16) and give:

- 1) **WHO** you are (your vessel's call sign and name).
 - 2) **WHERE** you are (your vessel's position in latitude/longitude or magnetic bearing and distance in nautical miles from a known geographical point).
 - 3) **WHAT** is wrong.
 - 4) Kind of assistance desired.
- At this point, pause and wait for Coast Guard or

another vessel's response and then continue with:

- 5) Number of persons aboard and condition of any injured.
- 6) Present seaworthiness of your vessel
- 7) Description of your vessel--length, type, cabin, masts, power, color of hull, superstructure, and trim.
- 8) Your listening frequency schedule.
- 9) If you have activated an EPIRB.

IF OBSERVING ANOTHER VESSEL IN DISTRESS

Transmit the distress call on 2182 kHz or 156.8 MHz (channel 16) and give:

- 1) Your position, and the bearing and distance to the vessel in distress.
- 2) Nature of distress.
- 3) Description of the vessel in distress.
- 4) Your intentions, course, and speed etc.
- 5) Repeat your radio call sign and name of your vessel, and give your listening frequency and schedule.

If you need **INFORMATION OR ASSISTANCE FROM THE COAST GUARD OTHER THAN IN DISTRESS**, call Coast Guard on either 2182kHz or 156.8 MHz (channel 16). You will then be asked to shift to a common working frequency allowing the distress frequencies to remain open.

INTERNATIONAL DISTRESS SIGNALS-

All seamen should be familiar with the international distress signals and procedures, both for recognition purposes and for self reliance in the event of distress where captain and officers may have been incapacitated.

Short range distress signals, limited to range of visibility or audibility are:

- 1) "SOS" (...---...) signal made by any audio or visual means.
- 2) International Flag Code "NC" (flag hoist).
- 3) Hoisting any square flag with a ball or any thing resembling a ball, above or below it.
- 4) Flames made visible (as burning oil barrel).
- 5) A rocket parachute flare or hand held flare showing a red light.
- 6) Rockets or shells, throwing red stars fired one at a time at short intervals.
- 7) Orange smoke as emitted from a distress flare.
- 8) A gun or other explosive device fired at about one minute intervals.
- 9) Continuous sounding of any fog-signal device.
- 10) Slowly and repeatedly raising and lowering arms outstretched to each side.
- 11) Signals transmitted by emergency position-indicating radiobeacons (EPIRBs).
- 12) A signal sent by radiotelephone consisting of the spoken word "MAYDAY"
- 13) Radiotelegraph alarm signal.
- 14) Radiotelephone alarm signal.
- 15) A piece of orange-colored canvas with either a black square and circle or other appropriate symbol

(for identification from the air).

16) A dye marker of any color.

NOTE*** In addition to those signals listed above, a high intensity white light, flashing at regular intervals from 50 to 70 times per minute is a distress signal in Inland Waters.

VISUAL DISTRESS SIGNAL REQUIREMENTS

All recreational boats, except those listed below are required to carry 3 day signaling devices and 3 night signaling devices or three combination day/night signaling devices. A combination of non-pyrotechnic and pyrotechnic signaling devices may be used to meet these requirements. Pyrotechnic and non-pyrotechnic Visual Distress Signal Devices must be Coast Guard approved, in serviceable condition, and ready for use.

No person in a boat shall display a visual distress signal on water under any circumstances except a situation where assistance is needed because of immediate or potential danger to the persons on board.

VISUAL DISTRESS SIGNALS (VDS)

All recreational boats, when used on coastal waters, the Great Lakes, territorial seas and those waters



International Distress Signals

connected directly to the Great Lakes and the territorial seas, up to a point where a body of water is less than two miles wide, must be equipped with Visual Distress

Signals. The following are exempted from the requirements for day signals and only need to carry night signals when operating at night:

- 1) Recreational boats less than 16 feet in length.
- 2) Boats participating in organized events such as races, regattas or marine parades.
- 3) Open sailboats less than 26 feet in length not equipped with propulsion machinery.
- 4) Manually propelled boats.

USCG APPROVED VISUAL DISTRESS SIGNALS INCLUDE:

DAY USE ONLY

APPROVAL NUMBERS DEVICE DESCRIPTION

160.022	Floating Orange Smoke Distress Signal (5 minutes).
160.037	Hand-held Orange Smoke Distress Signal.
160.057 &	
160.157	Floating Orange Smoke Signal (15 Minutes).
160.072	Orange Distress Signal Flag for Boats.

DAY AND NIGHT USE

APPROVAL NUMBERS DEVICE DESCRIPTION

161.013	Electric Distress Light for Boats.
160.021	Hand-held Red Flare Distress signal.
160.024	Parachute Red Flare Distress Flare (37mm) (These signals require use in combination with a suitable launching device) Launchers produced before January 1 1981, intended for use with approved signals are not required to be Coast Guard approved.
160.036	Hand-held Rocket-propelled Parachute Red Flare Distress Signal.
160.066	Red Aerial Pyrotechnic Flare Distress signal for Boats (These devices may be either meteor or parachute assisted type. Some of these signals may require use in combination with a suitable launching device).

WARNING: In California, launchers for meteors and parachute flares are considered firearms. Therefore, check with your local authorities before acquiring such a launcher.

HANDLING AND STORAGE

Pyrotechnic devices should be stored in a cool, dry location and must be readily accessible in case of an emergency. Care should be taken to prevent puncturing or otherwise damaging their coverings. A watertight container, such as a surplus ammunition box, painted orange or red and prominently marked "DISTRESS

SIGNAL" is recommended.

If young children are frequently aboard your boat, careful selection and proper stowage of visual distress signals becomes especially important. If you elect to carry pyrotechnic devices, select devices that are in tough packaging and that would be difficult to ignite accidentally.

Coast Guard Approved pyrotechnic devices carry an expiration date. This date cannot exceed 42 months from the date of manufacture and at such time the device can no longer be counted toward the minimum requirements.

SELECTING A VISUAL DISTRESS SIGNAL

All distress signaling devices have advantages and disadvantages. The most popular, because of cost, are the smaller pyrotechnic devices. Pyrotechnics make excellent distress signals but they have the drawback of one time usage. Additionally, there is the potential for both injury and property damage if pyrotechnics are not handled properly.

Pyrotechnic devices have a very hot flame and the ash and slag can cause burns and ignite materials that burn easily.

Projected devices, such as pistol launch and hand-held parachute flares and meteors, have many of the same characteristics of a firearm and must be handled with the same caution and respect.

The hand-held and the floating orange smoke signalling devices are both good signals to use on clear days. These signals are most effective in light to moderate winds. Higher winds tend to keep the smoke close to the water, dispersing the smoke and making it harder to detect.

Red hand-held flares can be used by day, but are most effective at night or in restricted visibility such as fog or haze. Only hand-held flares made after October 1, 1980 are approved by the Coast Guard for use on recreational boats. When selecting such flares, look for the Coast Guard approval number and date of manufacture. Make sure the device does not carry the markings, "Not approved for use on recreational boats".

The distress flag must be at least 3x3 feet with a black square and ball on an orange background. It is accepted as a day signal only and is most effective in bright sunlight. The flag is most distinctive when waved on something such as a paddle or boat hook or flown from a mast.

The electric distress light is accepted for night use only and must automatically flash the interval SOS distress signal (...---...). Flashed four to six times each minute, this is an unmistakable distress signal, well known to most mariners. The device can be checked anytime for serviceability if shielded from view.

NOTE*** An ordinary flashlight is not acceptable since it must be manually operated and does not normally produce enough power.

EMERGENCY POSITION INDICATING RADIOBEACONS (EPIRBS)

There have been a number of cases of overdue vessels which resulted in unsuccessful extensive searches. Other cases have been successfully prosecuted with minimum search effort because the craft in distress energized an EPIRB. The Search and Rescue (SAR) Aircraft were guided by a signal transmitted from the EPIRB located on either the distress vessel or its survival craft. An EPIRB provides a means of broadcasting a signal on a frequency monitored by most commercial and many private aircraft, and provides a homing signal to guide SAR craft to the distressed vessel. EPIRBS can be effective in situations where it is impossible to establish communications. An EPIRB is a simple yet reliable device that can provide the Coast Guard with a location of a vessel or persons in distress at sea.

EPIRBS are not designed to replace standard means of radio communications, such as a VHF-FM or HF-SSB transceiver. However, effective use of an EPIRB and a two-way radio can reduce the time required to locate a distressed vessel. In short, it can save lives!

EPIRBS are particularly effective when used in tandem with Search and Rescue Satellite Aided Tracking (SARSAT). SARSAT monitors distress transmissions from EPIRBS and provides locations to Coast Guard Rescue Coordination Centers. The following table lists the three types of EPIRBS:

Class A- 121.5 & 243.0 MHz VHF-AM

Floatfree. Required on vessels for ocean and coast traders whose route is more than 20 miles from a safe harbor. Energizes automatically when immersed in water.

Class B- 121.5 & 243.0 MHz VHF-AM

Energized manually before immersion in water. Use is voluntary for vessels operating more than 20 miles from the coast.

Class C- Channel 16 (156.8 Hz)VHF-FM for 15 seconds. Shifts to channel 15 (156.75 MHz) for longer periods for direction finding purposes, then re-cycles. Energized manually before immersion in water. Use is voluntary for vessels operating within 20 miles of the coast. Use by recreational vessels is especially encouraged.

Detection--Class A & B

SARSAT & high altitude aircraft

Detection--Class C

VHF-FM equipped shore units and other units that routinely monitor channel 16 such as Coast Guard aircraft and vessels.

NOTE*** If it becomes necessary to activate the EPIRB in a distress situation, **TURN IT ON AND LEAVE IT ON!**

406.025 MHz EPIRBS

The new 406.025 MHz EPIRBS frequency is phase modulated by a digital signal. This means in addition to the distress signal and homing assistance provisions, the digital signals contains information regarding the type of emergency, the country and identification code of the station in distress, and other information to facilitate search and rescue operations. The availability of this information will enhance search and rescue capabilities and help to minimize the false alarm problems now being experienced.

NOTE*** If it becomes necessary to activate the EPIRB in a distress situation, **TURN IT ON AND LEAVE IT ON!**

REDUCED PHASE-IN PERIOD FOR 406 MHz EPIRBS ON FISHING VESSELS

Coast Guard rules for EPIRBS on uninspected fishing, fish processing, and fish tending vessels, published in August 1988, stated that those carrying an approved Class A EPIRB before October 3, 1988, could keep that EPIRB in lieu of the new Category 1, 406 MHz device until August 17, 1994. Those not carrying a Class A EPIRB on October 3, 1988 would have to carry the 406 MHz device by May 17, 1990.

This six year phase-in period (August 1988 to August 1994) for the 406 MHz EPIRBS has been effectively shortened to three years by a Federal Communications Report and Order released on March 4, 1988. In that order, 121.5/243 MHz EPIRBS not meeting emission spectral requirements but carried on a vessel in order to satisfy Coast Guard carriage requirements, **must be replaced by August 1, 1991, regardless of when it had been installed** (Part 80, Section 1053 (a)(8) of FCC Rules). These emission spectral (coherency) requirements were enacted to ensure that EPIRBS are detected by satellite. Tests by NASA of samples of EPIRBS built before October 1988 and still available showed that all failed these FCC emission spectral requirements, or had type approval withdrawn for other reasons.

The combined effect of the Coast Guard and the FCC rules is that fishing vessels who had Class A EPIRBS in place before October 1988 will have to replace them with the Category 1, 406 MHz device by August 1, 1991.

For additional information contact LCDR Deno at:
Commandant (G-MVI-3)
U.S. Coast Guard Headquarters
Washington D.C. 20593-0001,
telephone (202) 267-1444.

NOTE*** If it becomes necessary to activate the EPIRB in a distress situation, **TURN IT ON AND LEAVE IT ON!**

THE COAST GUARD NEEDS YOUR HELP

Mariners are asked to help the Coast Guard in our effort to keep EPIRBs and our Search and Rescue Satellite Aided Tracking (SARSAT) an effective means to save lives and property. Nearly 99% of the activated EPIRBs the Coast Guard tracks down have been accidentally activated. As a result, much time, money and valuable search resources are wasted. Most importantly, search crews are placed at risk when responding to falsely activated EPIRBs. The satellite cannot tell these signals apart from those activated in an actual emergency. To help reduce the number of falsely activated EPIRBs in California, the Eleventh Coast Guard District will notify the Federal Communication Commission (FCC) of false activations of EPIRBs and request that punitive action be taken if appropriate.

You can assist the Coast Guard and yourself by doing the following:

- 1) Regularly inspect your EPIRBs, and other survival equipment to insure proper operating condition.
- 2) Check your EPIRB after handling or encountering rough seas to be sure it has not been accidentally activated.
- 3) If you do discover that your EPIRB has been accidentally activated immediately contact the nearest Coast Guard Group Operations Center and report it.
- 4) Test your EPIRB only after notifying the nearest Coast Guard Unit. Federal Communications Commission (FCC) regulations authorize testing during the first 5 minutes of the hour for three audio sweeps.
- 5) Periodically have your EPIRB inspected/examined by a radio shop to insure the EPIRB is transmitting on the proper frequency and at proper power levels.
- 6) **KNOW** how to operate your EPIRB before you need it in an emergency. EPIRBs range greatly in price but for those rescued because of their EPIRBs, the money was well spent. **The Coast Guard encourages all boaters to carry EPIRBs.**

SEARCH AND RESCUE OPERATIONS

Coast Guard search and rescue aircraft and surface craft use radar to assist in locating disabled vessels. Wooden and fiberglass vessels are poor radar targets. Operators of disabled craft that are the object of a search are requested to hoist, as high above the waterline as possible, a radar-reflecting device. If no special radar-reflecting device is aboard, an improvised device can be used. This should consist of metallic objects of irregular shape. The more irregular the shape, the better the radar reflective quality.

PROCEDURES AND SIGNALS BETWEEN AIRCRAFT AND SURFACE CRAFT FOR DIRECTING SURFACE CRAFT TO THE SCENE OF DISTRESS

The following procedures performed in any sequence by an aircraft means that the aircraft is directing a surface craft toward the scene of a distress incident:

- 1) Circling the surface craft at least once.
- 2) Crossing the projected course of the surface craft ahead at low altitude, opening and closing the throttle, or changing the propeller pitch.
- 3) Heading the direction in which the surface craft is directed. The surface craft should hoist the international code flag CHARLIE, or use any other signaling means available to indicate its intention to comply.
- 4) Crossing the wake of the surface craft close astern at low altitude while opening and closing the throttle or changing the propeller pitch means the assistance of the surface craft is no longer needed.



Coast Guard HH65 Helicopter

REQUEST FOR MEDICAL ADVICE AND MEDICAL EVACUATION INFORMATION

Free medical advice is made possible through the cooperation of government and commercial radio stations whose operators receive and relay messages from ships at sea and radio medical advice back to ships. Request for medical advice or personnel evacuation for vessels not using coastal radio stations should be made to the nearest Coast Guard facility.

The final decision for medical evacuation (MEDEVAC) from vessels rest with the Coast Guard Rescue Center and is based on an evaluation of symptoms by a Military Flight Surgeon.

Removal of personnel from vessels is limited to **EMERGENCY SITUATIONS AND MAY BE UNDERTAKEN BY THE COAST GUARD ONLY WHEN MEDICALLY INDICATED.** There are times when evacuation may be more injurious or dangerous to the patient than leaving the patient aboard until

arrival at the next port.

There is of course no restriction on the independent action by the master based on his own initiative or private medical services.

For medical advice and/or evacuation the following information must be supplied by the vessel to the Coast Guard:

- 1) Vessels name and call sign.
- 2) Vessels position and time at position.
- 3) Vessel's course, speed, next port and estimated time of arrival.
- 4) Patient's name, nationality, age, race and sex.
- 5) Patient's respiration, pulse and temperature.
- 6) Patient's symptoms and nature of illness.
- 7) Any known history of similar illness.
- 8) Location and type of pain.
- 9) Medical supplies carried aboard vessel.
- 10) Any medication given to patient.
- 11) On scene weather.
- 12) Communication schedule and frequency.

COAST GUARD HELICOPTER EVACUATION PROCEDURE

When requesting helicopter assistance

- 1) Give accurate position, time, speed, course, weather conditions, wind direction and velocity, voice and continuous wave (CW) capabilities and frequencies.
- 2) If not already provided, give complete medical information, including whether or not the patient is able to walk.
- 3) If you are beyond helicopter range, you will be directed to a rendezvous point within helicopter capabilities.
- 4) If there are any changes, advise immediately. Should the patient expire prior to arrival of the helicopter, be sure to advise.

PREPARATIONS PRIOR TO THE ARRIVAL OF THE HELICOPTER

- 1) Provide continuous radio guard on 2182 kHz, or specified frequency if possible. The helicopter cannot operate CW.
- 2) Select and clear the hoist area, preferably aft, with a minimum 50 foot radius if possible. This must include the securing of loose gear, awnings, and antenna wires. Trice up running rigging and booms. If the hoist is aft, lower the flagstaff.
- 3) If the hoist is at night, light up the pickup area as well as possible. **BE SURE YOU DO NOT SHINE ANY LIGHTS ON THE HELICOPTER** so the pilot is not blinded. If there are obstructions in the vicinity, put a light on them so the pilot will be aware of their positions.
- 4) Point searchlights vertically to aid in locating the ship, and secure them when the helicopter is on scene.
- 5) Advise location of pickup area **BEFORE** the helicopter arrives so that the pilot may make his approach aft, midship, or forward as required.
- 6) There will be high noise level under the helicopter, making voice communications almost impossible. Arrange a set of hand signals among the crew who

will assist.

- 7) High winds from the helicopter rotor wash that may make steering difficult for smaller power boats. Sailing vessels should drop their sails and switch to auxiliary power.
- 8) **INSURE ALL PERSONS ON DECK INVOLVED OR ASSISTING WITH THE EVACUATION ARE WEARING LIFEJACKETS.**

HELICOPTER HOISTING PROCEDURES

- 1) If possible, move the patient to a position as close to the hoist area as his condition permits. **TIME IS IMPORTANT.**
- 2) Normally, if a litter is required, it will be necessary to move the patient to the special litter which will be lowered by the helicopter. Be prepared to do this as quickly as possible. Be sure the patient is strapped in, face up, **WITH LIFE JACKET ON, IF HIS CONDITION PERMITS.**



- 3) Be sure the patient is tagged to indicate what medication, if any, was administered and when.
- 4) Have patient's medical record and necessary papers in an envelope or packed ready for transfer with him.
- 5) Change course so the ship rides as easily as possible with the wind 30 degrees off the bow, preferably the port bow. Try to choose a course to keep stack gases clear of the hoist area. Once established, maintain

course and speed.

- 6) Reduce speed if necessary to ease ships motion, but maintain steerage way.
- 7) If you do not have radio contact with the helicopter, when you are in all aspects ready for the hoist, signal the helicopter with a "come on" by hand, or at night by flashlight.
- 8) **ALLOW BASKET OR STRETCHER TO TOUCH THE DECK BEFORE HANDLING TO AVOID STATIC SHOCK.**
- 9) If a tail line is dropped by the helicopter, guide the basket or stretcher to deck with line. Keep line clear at all times.
- 10) Place patient in basket, sitting with hands clear of sides, or in the litter as described above. Signal hoist operator when ready for hoist. Patient signals by nodding head if able. Deck personnel give thumbs up.
- 11) If necessary to take litter away from hoist point, unhook hoist cable and keep free for helicopter haul in. **DO NOT ATTACH CABLE TO VESSEL OR ATTEMPT TO MOVE STRETCHER WITHOUT UNHOOKING.**
- 12) When patient is strapped in stretcher, signal helicopter to lower cable, hook up, and signal hoist operator when ready to hoist. Steady stretcher from turning or swinging.
- 13) If trail line is attached to basket or stretcher, use to steady. Keep feet clear of line.

HELICOPTER EVACUATION PROCEDURES

The following information is prescribed by the Coast Guard during helicopter evacuation from a vessel. If you have a radio aboard, further instructions may be given by the helicopter on the voice distress frequency.



PUMP DROP PROCEDURE

If a DISTRESS situation involves the control of flooding or dewatering, a portable pump will be flown to your location. The pump will be packed in a floatable container and will have a retrieving line attached. If delivered by a fixed wing aircraft, it will be dropped into the water near your vessel at a safe

distance. In California waters, pumps are delivered by helicopter in all but rare instances. If conditions are not safe for lowering to your deck, the helicopter will drop the pump into the water near your vessel.

Preparations for arrival of the helicopter are the same as outlined in Helicopter Hoisting Procedures shown above. Insure all persons on board are wearing lifejackets.

During lowering of the pump, allow the retrieving line to touch the deck to discharge static electricity before touching it. If your vessel still has propulsion, it should be underway as explained in Helicopter Hoisting Procedures.

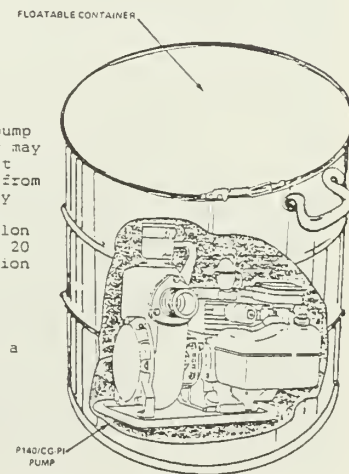
Once on deck, the canister should be released and the helicopter permitted to retrieve its hoist cable as soon as possible. Do not attach anything to your vessel that has not been detached from the hoist cable. Follow instructions provided with the pump.

When the pump has served its purpose, return it with the canister and all accompanying instructions and attachments to the nearest Coast Guard facility.

COAST GUARD DROP PUMP

The standard Coast Guard drop pump is capable of rapid delivery. It may be dropped by parachute from Coast Guard aircraft or passed by line from boat to boat. The pump is totally self contained within an aluminum watertight container with a 1 gallon gas can, 15 feet of suction hose, 20 feet of discharge hose, an explosion proof flashlight, starter rope, priming bucket and complete instructions for use.

The pump is rated at 140 GPM at a 10 foot head.



COAST GUARD MARITIME SAR ASSISTANCE POLICY

The Coast Guard policy regarding the towing of or assistance to disabled vessels is summarized below.

Non-distress search and rescue (SAR) cases are defined as those that include no threat to life and no reasonably foreseeable threat to life. For such cases, the Coast Guard will continue to respond, but our response might not include dispatching a Coast Guard or other noncommercial search and rescue resource to the scene. Instead, the Coast Guard will facilitate the notification of alternate towing and salvage providers, or firms with which the vessel requesting assistance has a contract or subscription.

If specific assistance is not requested or available, the Coast Guard will advise the mariner that a Marine Assistance Request Broadcast (MARB) can be made to determine if someone is available to come to their assistance. If no response to the MARB is heard in a reasonable period of time, a Coast Guard Auxiliary vessel may be directed to respond. It should be noted that the Coast Guard Operations Center handling the

case will make the decision of what constitutes a distress and a reasonable response time for the circumstance at hand.

Coast Guard resources normally do not provide immediate assistance in non-distress cases where there is alternate assistance available. A Coast Guard resource may assist in a non-distress situation when no higher priority missions exist and no other capable resource is reasonably available.

Acceptance or rejection of an offer of assistance is a function of the vessel operator. The vessel operator may also elect to contact commercial assistance on a commercial frequency. Operators of vessels in need of assistance are encouraged to further query the firms concerning their capabilities, procedures, fees, etc... Additionally, the operator of the vessel in need of assistance may choose to arrange assistance from other sources such as "Good Samaritan" passersby or other commercial firms.

If a Coast Guard unit is already on scene with a non-distress case, they will respond only if higher priority operations do not exist and alternative providers cannot respond in a reasonable time. If and when we respond in a non-distress situation, we will tow a vessel in need of assistance only to the nearest safe mooring that can accommodate the vessel. Arrangements for further assistance, if needed, will be the responsibility of the vessel requesting assistance. If persons remain on board the vessel requesting assistance and no telephone facilities are available, the Coast Guard will continue to monitor the progress of the case by radio and will help facilitate notification of commercial firms as if we were receiving initial notification.

The Coast Guard will not normally release the tow to a commercial firm unless it can be done safely and alternative assistance is desired or a higher priority Coast Guard operation exists.

The Coast Guard's primary concern in a search and rescue situation is that timely and effective assistance be provided. The Coast Guard will continue to monitor the progress of the case by radio and if the severity of the situation escalates, the Coast Guard will respond as necessary. If any doubt on the severity of the situation exists or if the case is an emergency, the Coast Guard will respond by sending all available resources.

TOWING PROCEDURE

Have all personnel on board don a life jacket or other personal flotation device. Clear the forward part of the vessel of unnecessary people and gear in order to safely receive the tow line. Follow the instructions given by the vessel taking you in tow concerning hook-up, emergency breakaway, position of rudder, communications and maintaining a 24 hour watch in the pilot house.

SHIP ABANDONMENT AND HYPOTHERMIA

If you are involved in a ship casualty and are forced to abandon ship, your survival procedure should be preplanned, thereby increasing your chances for survival and a successful rescue. Records show that ship sinkings, even in the worst cases, usually require at least 15 to 30 minutes for the vessel to fully submerge. This affords valuable time for preparation. Here is some sound guidance to follow if you find yourself in this situation:

- 1) Put on as much warm clothing as possible, making sure to cover head, neck, hands and feet.
- 2) If an immersion (exposure) suit is available put it on over the warm clothing.
- 3) If the immersion (exposure) suit does not have inherent flotation, put on a lifejacket and be sure to secure it correctly.
- 4) All persons who know that they are likely to be affected by seasickness should, before or immediately after boarding the survival craft, take some recommended preventative tablets or medicine in a dose recommended by the manufacturer. The incapacitation caused by seasickness interferes with your survival chances; the vomiting removes precious body fluid while seasickness in general makes you more prone to hypothermia.
- 5) **Avoid entering the water if possible.** Board davit-launched survival craft on the embarkation deck. If davit-launched survival craft are not available, use overside ladders, or lower yourself by a rope or fire hose.
- 6) **NEVER jump** from higher than 5 meters (16.4 feet) into the water unless it is your last resort. Try to minimize the shock of sudden cold immersion. Rather than jumping into the water, try to lower yourself gradually. A sudden plunge into the cold water can cause rapid death. An uncontrollable rise in your breathing rate may result in an intake of water into the lungs. When it is necessary to jump into the water keep your elbows at your sides and cover your nose and mouth with one hand while holding the wrist or elbow firmly with the other hand.
- 7) Once in the water orient yourself and try to locate the ship, lifeboats, liferafts, other survivors, or other floating objects. Button up your clothing if you were unable to do so before entering the water. In cold water you may experience violent shivering and great pain. These are natural body reflexes that



are not dangerous. You should take necessary actions as quickly as possible before you lose full use of your hands (button up clothing, turn on signal lights, locate whistle, etc.).

- 8) While afloat in the water, do not attempt to swim unless it is to reach a nearby craft, a fellow survivor, or a floating object on which you can lean or climb. Unnecessary swimming will "pump" out any warm water between your body and the layers of clothing, thereby increasing the rate of the heat loss from the inner core to the outer layer of the body. This results in a very rapid heat loss. It is most important to remain as still as possible in the water, however painful it may be.
- 9) The body position you assume in the water is also very important in conserving heat. Float as still as possible with your legs together, elbows close to your side and arms folded across the front of your lifejacket. This position minimizes the exposure of the body surface to the cold water. Try to keep your head and neck out of the water. Another heat conserving position is to huddle closely to one or more persons afloat, making as much body contact as possible. You must be wearing a lifevest to be able to hold these positions in the water.
- 10) Try to board a lifeboat, raft, or other floating platform or object as soon as possible in order to shorten your immersion time (you lose body heat many times faster in water than in air). Since the effectiveness of your insulation is seriously reduced by water soaking, you must try to shield yourself from the wind to avoid a wind-chill effect (convection cooling). If you manage to climb aboard a lifeboat, shielding can be accomplished with the aid of a canvas cover or tarpaulin, or an unused garment. Huddling close to the other occupants of the lifeboat or raft will also conserve body heat.
- 11) The head and the neck are high heat loss areas and must be kept above the water. That is why it is even more important to wear a lifevest in cold water. If you are not wearing a vest, tread the water only as much as necessary to keep your head out of the water.
- 12) Keep a positive attitude about your survival and rescue. This will improve your chance of extending your survival time until rescue comes.

Your will to live DOES make a difference.

SURVIVAL SUITS

The Coast Guard has approved the use of survival suits as a substitute for some types of personal flotation devices (46 CFR 160.071). **A survival suit is an extremely important piece of safety equipment.**

In January 1988, a Northern California couple survived the capsizing of their trimaran "Atlanta" in waters off Mexico thanks to proper preparation and the availability of survival suits. The couple picked up their new boat in Mexico intending to spend the next

two weeks sailing home to San Francisco.

Before their departure the sailors had purchased two new survival suits and had their EPIRB calibrated with new batteries installed. They were surprised by the cost of these items but it was a very wise investment indeed.

Gale-force winds caught "Atlanta" 500 miles south of San Diego forcing them to run before the storm for 12 days. Finally turning north, the "Atlanta" experienced 50 foot seas and hurricane force winds that finally overpowered the trimaran. The wind caught under the hulls and threw her sideways on a breaking crest capsizing the trimaran in a gentle rolling motion.

Because of their effectiveness, the Coast Guard highly recommends that mariners carry survival suits.

Donning the survival suits and energizing their EPIRB the two sailors clung to a crossbeam and talked



throughout the night despite the 53 degree water temperature and 45 degree air temperature.

The satellite-bounced EPIRB signal was finally received in San Francisco, Alaska, and Illinois, which had gone undetected earlier due to swirling seas over its antenna. Once the EPIRB signal was received, the Coast Guard Cutter Resolute was diverted to the search area at maximum speed. On the third day, using the Resolute as a refueling platform, a Coast Guard HH65 Dolphin Helicopter hoisted the couple to safety.

There's no question that the combination of survival suits and EPIRB saved their lives. Without either of these two items the couple would have perished. The survival suits gave them days of life instead of hours.

Because survival suits are so awkward to get into, boaters should practice using them often. It is difficult to get into a survival suit in the water, and even more difficult in life-critical situations. An afternoon practicing is time well spent and might be a lifesaver sometime down the line. Survival suits cost several hundred dollars which is a small price to pay for

survival in the frigid water conditions found along the California coast.

AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE (AMVER)

The AMVER System, operated by the United States Coast Guard, with the cooperation of coastal radio stations of many nations, is an international maritime mutual assistance program which provides important aid to the development and coordination of search and rescue (SAR) efforts in the offshore areas of the world. Merchant vessels of all nations who operate on the high seas are highly encouraged to voluntarily send movement (sailing) reports and periodic position reports to the AMVER Center located at Coast Guard New York, via selected radio stations. Information from these reports is entered into an electronic computer which generates and maintains dead reckoning positions. Characteristics of vessels which are valuable for determining SAR capability are also entered into the computer from available sources of information. Information concerning the predicted location and SAR characteristics of each vessel known to be within the area of interest is made available, upon request, to recognized SAR agencies of any nation, or vessels needing assistance. Predicted locations are only disclosed for reasons related to maritime safety.

Messages sent within the AMVER System are at no cost to the ship or owner. Benefits to shipping include (1) improved chances of aid in emergencies; (2) reduced number of calls for assistance to vessels not favorably located; (3) reduced time lost for vessels responding to calls for assistance. An AMVER participant is under no greater obligation to render assistance during an emergency than a vessel who is not participating.

Instructions guiding participation in the AMVER System are available in the following languages: Chinese, Danish, Dutch, English, French, German, Greek, Italian, Japanese, Korean, Polish, Norwegian, Portuguese, Russian, Spanish, and Swedish. They are available from:

**Commander (dtm)
Eleventh Coast Guard District
400 Oceangate
Long Beach, Ca 90822-5399
Attn: AMVER Officer**

and at U.S. Coast Guard District Offices, Marine Inspection Offices, and Captain of the Port Offices in major U.S. ports. Requests for instructions should state the language desired if other than English.

For AMVER participants bound for U.S. Ports there is an additional benefit. AMVER participation via messages which include the necessary information is considered to meet the requirements of the United States Code of Federal Regulations, Title 33, Parts 161.7 and 161.9. These require, with certain exceptions, that the Master or agent of each United States registered vessel and every foreign vessel arriving at a United States Port (including the Great Lakes) from an offshore passage give at least 24 hour advance notice to the U.S. Coast Guard prior to arrival. The Code should be consulted to determine the exact current requirements, the exceptions, and the conditions of constructive compliance. The AMVER message must include the first port of call where a harbor entrance serves more than one port. The AMVER Center forwards pertinent information to the appropriate Coast Guard officials.

Search and Rescue operational procedures are contained in the International Maritime Organization (IMO) Merchant Ship Search and Rescue Manual (MERSAR). Copies of MERSAR may be obtained for U.S. flag ships from local Coast Guard Marine Safety Offices and Marine Inspection Offices, or by writing to:

**U.S. Coast Guard (G-NRS-3)
Washington, D.C. 20593.**

Other flag vessels may purchase MERSAR direct from IMO.

CHAPTER 2

COMMUNICATIONS

COMMUNICATIONS WITH THE COAST GUARD ON VHF-FM AND HF (SSB)

The voice frequencies of 157.1 MHz (Channel 22A) and 2670 kHz are U.S. Coast Guard frequencies reserved for liaison between the Coast Guard and non-government vessels, and for Coast Guard Marine Information Broadcasts. The use of these frequencies by non-government licensees is restricted exclusively to communications with the Coast Guard. Coast Guard Stations do not monitor these frequencies, but can

shift to these frequencies after an initial call on 156.8 MHz (Channel 16) or 2182 kHz.

HIGH FREQUENCY INFORMATION

At most Coast Guard Radio and Communications Stations throughout the U.S., HF-SSB frequencies are monitored. In the Pacific, three Coast Guard Communications Stations guard HF-SSB frequencies during the times shown in the chart below:

CARRIER FREQUENCIES (kHz)		SAN FRANCISCO	HONOLULU	KODIAK
SHIP TRANSMIT	SHORE TRANSMIT	(NMC)	(NMO)	(NOJ)
4134.3 kHz	4428.7 kHz	0000-2400	0600-1800	On request
6200.0 kHz	6506.4 kHz	0000-2400	0000-2400	0000-2400
8241.5 kHz	8765.4 kHz	0000-2400	0000-2400	On request
12342.4 kHz	13113.2 kHz	0000-2400	1800-0600	On request
16534.4 kHz	17307.3 kHz	On request	On request	On request

CHANNEL 16 (156.8 MHz)

This is the international VHF-FM radiotelephone distress, safety and calling frequency used for distress and urgent traffic, safety signals, marine information broadcasts, and general calling and reply. **After the preliminary call to establish communications, mariners should shift as soon as possible to an appropriate working frequency.** In order to facilitate the reception of distress traffic, all transmissions should be kept to an absolute minimum and must not exceed one minute.

MISUSE OF VHF-FM CHANNEL 16 (156.8 MHz) THE INTERNATIONAL VHF-FM DISTRESS AND CALLING FREQUENCY

It has been noted that the flagrant misuse of Channel 16 with superfluous and illegal transmissions have clearly disrupted the safety and distress function of 156.8 MHz. Both the FCC and the Coast Guard are working to eliminate these interference problems. A recent FCC rule change now prohibits radio calls to the Coast Guard on channel 16 (156.8 MHz) for routine

radio checks. This change is reflected in Title 47 Code of Federal Regulations Part 83.

NO RADIO CHECKS ON CHANNEL 16, FCC RULES

A Federal Communications Commission ruling prohibits boaters from calling the Coast Guard for non-emergency radio checks on the VHF-FM distress frequency, Channel 16.

The ruling was made because the enormous number of requests for radio checks on the emergency channel was hampering the Coast Guard's ability to answer and maintain radio contact with boaters in distress.

Boaters may still check their equipment on any non-restricted VHF channels with other boaters, shore stations, marinas or the yacht club with which they may be affiliated. They may also check their equipment with the marine operator for a fee.

CHANNEL 13 (156.65 MHz)

This is the Vessel Bridge-to-Bridge

Radiotelephone frequency. All vessels of 300 gross tons or more, 100 gross tons and over carrying one or more passengers for hire, 26 feet or longer engaged in towing, and every dredge or floating plant engaged in or near a channel or fairway in operations likely to restrict or affect navigation of other vessels, are required to participate in the Bridge-to-Bridge Radiotelephone system. Channel 13 is for the exclusive use of these vessels to transmit and confirm the intentions of other vessels in passing, meeting or crossing situations, and to provide any other necessary information for navigational safety.

USE OF VHF-FM CHANNEL 77 (156.875 MHz) - The use of VHF-FM channel 77 (156.875 MHz) is restricted to communications with pilots regarding the movement and docking of ships. Output must not exceed 1 watt. The use of channel 77 by commercial and recreational boat owners is not allowed and is in violation of (FCC) Regulations.

MARINE RADIO TELEPHONE USERS HANDBOOK
The FCC has recognized that there are several problems

with their rules which apply to recreational boaters. Although most recreational or pleasure vessels are not required to have a two-way radio, those that do are required to maintain a copy of the FCC rules concerning Stations on Shipboard in the Maritime Services. These rules apply to marine radios on all stations in the Maritime Mobile Radio Service. This includes all radio communications between coast stations and ship stations, between ship stations and between stations on board a single vessel. Few of the rules apply directly to recreational vessels. Additionally, the rules are often too technical for the typical recreational boater and the writing style of the rules makes them difficult to understand. The result of these problems has been to make the rules inaccessible to recreational boaters and discourage their use. However, now available for the marine radio user is the booklet "Marine Radio Telephone Users Handbook", which reflects FCC Radiotelephone Regulations. To get your copy send \$7.50 to:
Radio Technical Commission for Marine Services
P. O. Box 19087
Washington, D.C. 20036

FREQUENCIES (MHz)			CHANNEL USAGE
<u>CHANNEL NUMBER</u>	<u>SHIP TRANSMIT</u>	<u>SHIP RECEIVE</u>	<u>INTENDED USE</u>
1	156.050	156.050	PORT OPERATIONS AND COMMERCIAL (Intership and Ship-to-Coast) Available.
3	156.150	156.150	PORT OPERATIONS AND COMMERCIAL (Intership and Ship-to-Coast) Available.
5	156.250	156.250	PORT OPERATIONS (Intership and Ship-to-Coast) Available for use within the USCG Vessel Traffic Services radio protection area of New Orleans and Houston.
6	156.300	156.300	INTERSHIP SAFETY Required for all VHF-FM equipped vessels. For intership safety purposes and search and rescue (SAR) communications with ships and aircraft of the U.S. Coast Guard. Must not be used for non-safety communications.
7A	156.350	156.350	COMMERCIAL (Intership and Ship-to-Coast). A working channel for commercial vessels to fulfill a wide scope of business and operational needs.
8	156.400	156.400	COMMERCIAL (Intership). Same as Channel 7A except limited to intership communications.
9	156.450	156.450	COMMERCIAL AND NON-COMMERCIAL (Intership and Ship-to-Coast). Some examples of use are communications with commercial marinas and public docks to obtain supplies or schedule repairs and contacting commercial vessels about matters of common concern.
10	156.500	156.500	COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 7A.
11	156.550	156.550	COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 7A. It should be noted, however, in certain ports channels 11, 12, and 14 are used selectively for the USCG Vessel Traffic Services.
12	156.600	156.600	PORT OPERATIONS (Intership and Ship-to-Coast). Available to all vessels. This is a traffic advisory channel for use by agencies directing the movement of vessels in or near ports, locks, or waterways. Messages are restricted to the operational handling, movement and safety of ships and, in emergency, to the safety of persons. It should be noted, however, in certain ports channels 11, 12 and 14 are used selectively for USCG Vessel Traffic Service. San Francisco Vessel Traffic Service working frequency.

<u>CHANNEL NUMBER</u>	<u>SHIP TRANSMIT</u>	<u>SHIP RECEIVE</u>	<u>INTENDED USE</u>
13	156.650	156.650	NAVIGATIONAL (SHIP'S) BRIDGE TO (SHIP'S) BRIDGE. This channel is available to all vessels and is required on large passenger and commercial vessels (including many tugs). Use is limited to navigational communications such as in meeting and passing situations. Abbreviated operating procedures (call sign omitted) and 1 watt maximum power (except in certain special instances) are used on this channel for both calling and working. For recreational vessels, this channel should be used for listening to determine the intentions of large vessels. This is also the primary channel used at locks and bridges.
14	156.700	156.700	PORT OPERATIONS (Intership and Ship-to-Coast). Same as Channel 12.
15	156.750	156.750	ENVIRONMENTAL (Receive only). A receive only channel used to broadcast environmental information to ships such as weather, sea conditions, time signals for navigation, notice to mariners, and EPIRB's. Most of this information is also broadcast on the weather (WX) channels.
16	156.800	156.800	DISTRESS, SAFETY AND CALLING (Intership and Ship-to-Coast) also EPIRB's . Required channel for all VHF-FM equipped vessels. Must be monitored at all times station is in operation (except when communicating on another channel). This channel is monitored, also, by the Coast Guard, public coast stations and many limited coast stations. Calls to other vessels are normally initiated on this channel. Then, except in an emergency, you must switch to a working channel.
17	156.850	156.850	STATE CONTROL. Available to all vessels to communicate with ship and coast stations operated by state or local governments. Messages are restricted to regulation and control, or rendering assistance. Use of lowpower (1 watt) setting is required by international treaty.
18A	156.900	156.900	COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 7A.
19A	156.950	156.950	COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 7A.
20	157.000	161.600	PORT OPERATIONS (Intership and Ship-to-Coast). Available to all vessels. This is a traffic advisory channel for use by agencies directing the movement of vessels in or near ports, locks, or waterways. Messages are restricted to the operational handling, movement and safety of ships and, in emergency, to the safety of persons.
21A	157.050	157.050	U.S. GOVERNMENT ONLY.
22A	157.100	157.100	COAST GUARD LIAISON. This channel is used for communications with U.S. Coast Guard ships, coast and aircraft stations after first establishing communications on Channel 16. Navigational warnings and, where not available on WX channels, Marine Weather forecasts are made on this frequency. It is strongly recommended that every VHF radiotelephone include this channel.

FREQUENCIES (MHz)			CHANNEL USAGE
<u>CHANNEL NUMBER</u>	<u>SHIP TRANSMIT</u>	<u>SHIP RECEIVE</u>	<u>INTENDED USE</u>
23A	157.150	157.150	U.S. GOVERNMENT ONLY. PUBLIC CORRESPONDENCE (Ship-to-Coast). Available to all vessels to communicate with public coast stations. Channels 26 and 28 are the primary public correspondence channels and therefore become the first choice for the cruising vessel having limited channel capacity.
24	157.200	161.800	
25	157.250	161.850	PUBLIC CORRESPONDENCE (Ship-to-Coast) Same as Channel 24.
26	157.300	161.900	PUBLIC CORRESPONDENCE (Ship-to-Coast) Same as Channel 24.
27	157.350	161.950	PUBLIC CORRESPONDENCE (Ship-to-Coast) Same as Channel 24.
28	157.400	162.000	PUBLIC CORRESPONDENCE (Ship-to-Coast) Same as Channel 24.
63	156.175	156.175	Available for use within the USCG designated Vessel Traffic Service (VTS) area of New Orleans, and the Lower Mississippi River.
65A	156.275	156.275	PORT OPERATIONS (Intership and Ship-to-Coast). Same as Channel 12.
66A	156.325	156.325	PORT OPERATIONS (Intership and Ship-to-Coast). Same as Channel 12.
67	156.375	156.375	COMMERCIAL (Intership). Same as Channel 7A except limited to intership communications. In the New Orleans USCG Vessel Traffic Service protection areas, use is limited to navigation bridge-to-bridge intership purposes.
68	156.425	156.425	NON-COMMERCIAL (Intership and Ship-to-Coast). A working channel for non-commercial vessels. May be used for obtaining supplies, scheduling repairs, berthing and accommodations, etc. from yacht clubs or marinas, and intership operational communications such as piloting or arranging for rendezvous with other vessels. It should be noted that Channel 68 is the most popular non-commercial channel and therefore is the first choice for vessels having limited channel capacity.
69	156.475	156.475	NON-COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 68.
70	156.525	156.525	MAY ONLY BE USED FOR DISTRESS AND SAFETY CALLING OR GENERAL PURPOSE CALLING USING DIGITAL SELECTIVE CALLING (DSC).
71	156.575	156.575	NON-COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 68.
72	156.625	156.625	NON-COMMERCIAL (Intership). Same as Channel 68, except limited to intership communications.
73	156.675	156.675	PORT OPERATIONS (Intership and Ship-to-Coast). Same as Channel 12.
74	156.725	156.725	PORT OPERATIONS (Intership and Ship-to-Coast). Same as Channel 12.
77	156.875	156.875	PORT OPERATIONS (Intership) Limited to intership communications to and from pilots concerning the docking of ships.
78A	156.925	156.925	NON-COMMERCIAL (Intership and Ship-to-Coast). Same as Channel 68.

FREQUENCIES (MHz)			CHANNEL USAGE
<u>CHANNEL NUMBER</u>	<u>SHIP TRANSMIT</u>	<u>SHIP RECEIVE</u>	<u>INTENDED USE</u>
79A	156.975	156.975	COMMERCIAL (Intership and Ship-to-Coast).Same as Channel 7A.
80A	157.025	157.025	COMMERCIAL (Intership and Ship-to-Coast).Same as channel 7A.
81A	157.075	157.075	U.S. GOVERNMENT ONLY.
82A	157.125	157.125	U.S. GOVERNMENT ONLY.
83A	157.175	157.175	U.S. GOVERNMENT ONLY.
84	157.225	161.825	PUBLIC CORRESPONDENCE (Ship-to-Coast)Same as Channel 24.
85	157.225	161.825	PUBLIC CORRESPONDENCE (Ship-to-Coast)Same as Channel 24.
86	157.325	161.925	PUBLIC CORRESPONDENCE (Ship-to-Coast)Same as Channel 24.
87	157.375	161.975	PUBLIC CORRESPONDENCE (Ship-to-Coast)Same as Channel 24.
88	157.425	162.025	In the areas of the Great Lakes and along the St. Lawrence Seaway available for use by ship stations for public correspondence. Same as Channel 24.
88A	157.425	157.425	COMMERCIAL (Intership). Except in the Great Lakes and along the St. Lawrence Seaway. Same as Channel 7A except limited to intership communications and between commercial fishing vessels and associated aircraft while engaged in commercial fishing.
WX1	162.550		WEATHER (Receive only). To receive weather broadcasts of the Department of Commerce, National Oceanic and Atmospheric administration (NOAA).
WX2	162.400		WEATHER (Receive only). Same as WX1.
WX3	162.475		WEATHER (Receive only). Same as WX1.

NOTE: The addition of the letter "A" to the channel number indicates that the ship receive channel used in the United States is different from the one used by vessels and coast stations of other countries. Vessels equipped for U.S. operations only will experience difficulty communicating with foreign ships and coast stations on these channels..

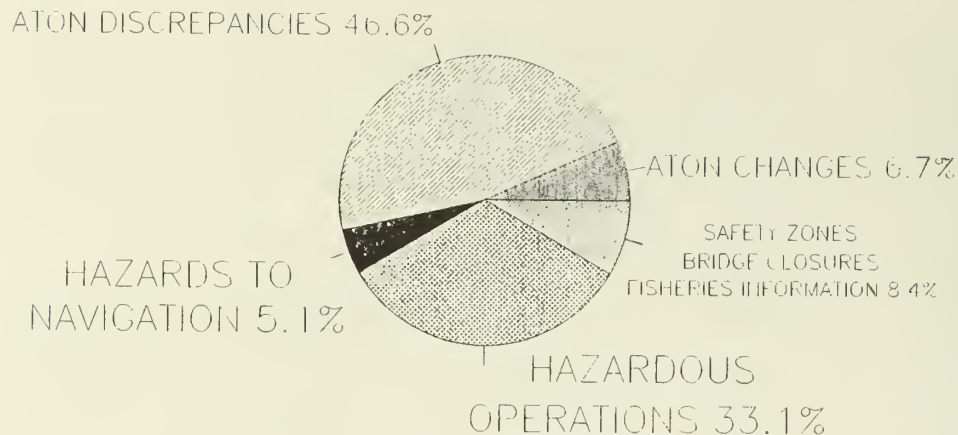
BROADCAST NOTICE TO MARINERS

Broadcast Notice to Mariners are issued by the Coast Guard in order to disseminate important mariner information to the maritime community with the most expedient means available; the VHF and Single Side Band (SSB) radios. Broadcast Notice to Mariners will always be issued for the establishment, discontinuance, changes or discrepancies in Aids to Navigation. Marine obstructions, temporary changes in bridge clearance, interruptions in normal drawbridge operations, dredging, shoaling or changes in channel widths, hazardous military operations, and other hazards to navigation will be broadcast as necessary for safe navigation.

COAST GUARD MARINE SAFETY BROADCASTS

The Coast Guard broadcasts marine safety information on VHF-FM Channel 22A (157.1 MHz) and on 2670 kHz single sideband (SSB). These safety broadcasts contain information such as notice to mariners, storm warnings, distress warnings, and other information that is vital to safe navigation.

Following a preliminary call on VHF-FM Channel 16 (156.8 MHz) and/or 2182 kHz, mariners are instructed to shift to VHF-FM Channel 22A simplex (157.1 MHz) or 2670 kHz (SSB) respectively.



Broadcast Notice to Mariners Information

Channel 22A (157.1 MHz) used in the United States is the ship station transmit frequency portion of the International Channel 22. This simplex use of Channel 22A (157.1 MHz) is not compatible with the international duplex arrangement of the channel (coast transmit 161.7 MHz, ship transmit 157.1 MHz), described in appendix 18 of the International Telecommunications Union (ITU) Radio Regulations. As a result, up to 60 percent of the foreign flag vessels in U.S. waters cannot receive Coast Guard maritime broadcast on channel 22A.

Operators who plan to transit waters and who do not have VHF radios tunable to the United States Channel 22A are urged to obtain the necessary equipment. As a minimum, they should continually monitor 2182 kHz (SSB) for announcements of Coast Guard marine broadcasts on 2670 kHz (SSB).

SCHEDULED MARINE BROADCASTS

Coast Guard San Francisco Communication Station (NMC) broadcasts marine information (including broadcast notice to mariners) and coastal weather on radiotelegraph (CW) and radiotelephone (voice) frequencies. CW broadcasts are made on 472 kHz with prior announcement on 500 kHz. Voice broadcasts are made on 2670 kHz with prior announcement on 2182 kHz. Coast Guard Group Monterey, Coast Guard Group Humboldt Bay, Coast Guard Group San Francisco, Coast Guard Group Los Angeles/Long Beach, and

Coast Guard Group San Diego broadcast marine information on radiotelephone (voice only) with prior announcement on 2182 kHz and 156.8 MHz (Channel 16).

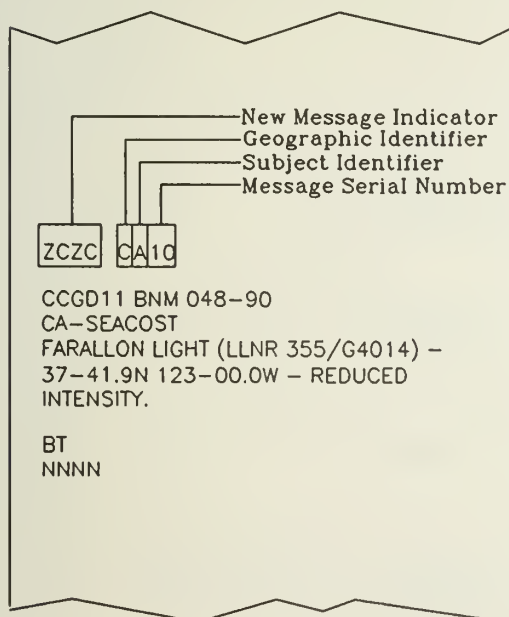
NAVIGATIONAL WARNING SYSTEM (NAVTEX)

NAVTEX is an internationally standard method of receiving notice to mariners and marine weather forecasts using small, low cost printing receivers designed to be installed in the pilothouse of a vessel. Each NAVTEX message broadcast contains a four-character header describing: Station ID (first character); message content (second character); and message serial number (third & fourth character). This header allows the microprocessor in the ship-borne receiver to screen messages from only those stations relevant to the user, messages of subject categories needed by the user, and messages not previously received by the user. Screened messages are printed on a small roll of paper as they are received, to be read by the mariner at their convenience. All other messages are suppressed. Mariners who may not have a knowledge of Morse code or those not able to man a radio on a 24-hour basis in order to hear critical warning messages should find a significant advantage in owning a NAVTEX receiver. With NAVTEX, a mariner will no longer find it necessary to listen to, or sift through, a large number of non-relevant data to obtain the information necessary

for safe navigation.

Information broadcast over NAVTEX includes, but is not limited to: broadcast notice to mariners, offshore weather forecasts, offshore marine advisory warnings, search and rescue information and electronic navigation information.

NAVTEX broadcasts from Long Beach, CA; San Francisco, CA and Astoria, OR will begin trial operational broadcasts in mid-March 1990. Once installation is complete, NAVTEX coverage should be reasonably continuous from the coast out to 200 NM.



NAVTEX MESSAGE SUBJECT IDENTIFIERS

A:	Navigational Warning
B:	Meteorological Warning
C:	Ice Report
D:	Search and Rescue Information
E:	Meteorological Forecast
F:	Pilot Service
G:	Decca Message
H:	LORAN C Message
I:	Omega and Differential Omega Messages
J:	SATNAV Message
K:	Other Electronic NAVAID System Messages
L:	Navigation Warnings (additional to A)
M to U:	Not yet defined
V to Y:	Special trials (i.e. non-English broadcasts)
Z:	No Message on Hand (QRU)

In the United States, the Coast Guard presently broadcasts NAVTEX from Hawaii, Guam, Boston, MA; Portsmouth, VA; Miami, FL; New Orleans, LA and San Juan, PR. Future sites include Long Beach, CA; San Francisco, CA; Astoria, OR; Kodiak, AK; Adak, AK. Their broadcast schedule is as follows:

PACIFIC AREA

ADAK, ALASKA (NOJ)

Identification: X

Schedule (UTC): 0000, 0500, 1200, 1745

ASTORIA, OREGON (NMC)

Identification: W

Schedule (UTC): 0130, 0730, 1330, 1930

GUAM (NRV)

Identification: V

Schedule (UTC): 0100, 0700, 1300, 1900

HONOLULU, HAWAII (NMO)

Identification: O

Schedule (UTC): 0040, 0640, 1240, 1840

KODIAK, ALASKA (NOJ)

Identification: J

Schedule (UTC): 0300, 0900, 1500, 2115

LONG BEACH, CALIFORNIA (NMC)

Identification: Q

Schedule (UTC): 0445, 1045, 1645, 2245

SAN FRANCISCO, CALIFORNIA (NMC)

Identification: C

Schedule (UTC): 0400, 1000, 1600, 2200

SCHEDULE OF MARINE INFORMATION BROADCAST--INCLUDING BROADCAST NOTICE TO MARINERS AND COASTAL WEATHER.

STATION	GMT TIMES	FREQUENCY	VHF-FM CHANNEL
SAN FRANCISCO COMMUNICATION STATION			
Radiotelephone (V)	0203 & 1403	2670 kHz	
Radiotelegraph (CW)	0500 & 1600	472 kHz	
	0300 & 1700	472 kHz	
	0400 & 1830	472 kHz	
GROUP SAN FRANCISCO			
Radiotelephone (V)	1600 & 1900 2330	157.1 MHz	22A
GROUP MONTEREY			
Radiotelephone (V)	1615 & 2345	157.1 MHz	22A
	0333 & 1533	157.1 MHz	22A
GROUP HUMBOLDT BAY			
Radiotelephone (V)	1615 & 2315	157.1 MHz	22A
	0303 & 1503	2670 kHz	
GROUP SAN DIEGO			
Radiotelephone (V)	0103 & 1703	157.1 MHz	22A
GROUP LOS ANGELES/LONG BEACH			
Radiotelephone (V)	0200 & 1300	157.1 MHz	22A
	0500 & 1800	2670 kHz	

CONTINUOUS WEATHER INFORMATION VIA VHF-FM RADIO (WX1 & WX2)

The National Weather Service (NWS) has established a network of VHF-FM continuous weather information radio stations. The programming on these stations is oriented on the present and near future with special emphasis on weather and river warnings. Programming will be responsive to user's requirements and will vary somewhat according to the season and to weather situations. Individuals and organizations requiring frequent reference to weather situations should be able to satisfy most of their requirements by reference to radio weather.

NOTE: Since very high frequency (VHF) radio propagation requires direct line of sight, there will be some reduction of reception in local shadow areas behind hills, mountains, cliffs, backside of offshore islands, etc.

NATIONAL WEATHER SERVICE TRANSMITTING STATIONS

CITY	STATION	FREQUENCY	
San Diego	KEC-62	162.400 MHz	WX 2
Los Angeles	KWO-37	162.550 MHz	WX 1
Santa Barbara	KIH-34	162.400 MHz	WX 2
San Luis Obispo	DIH-31	162.550 MHz	WX 1
Monterey	KEC-49	162.400 MHz	WX 2
Sacramento	KEC-57	162.550 MHz	WX 1
San Francisco	KEC-82	162.400 MHz	WX 2
Point Arena	KIH-30	162.550 MHz	WX 1
Eureka	KEC-82	162.400 MHz	WX 2

VHF-FM PUBLIC CORRESPONDENCE STATIONS

CALL SIGN	MARINE OPERATOR NAME	CHANNEL
KMB 393	San Pedro	26 & 24
KUF 847	Redondo	27
KUF 739	Santa Barbara	25
KLU 727	San Luis Obispo	26
KTR 860	Monterey	28
KUZ 408	Santa Cruz	27
KMH 828	San Francisco	26 & 84
KGW 464	Stockton	28 & 27
KXC 711	Bodega Bay	25
KQU 591	Fort Bragg	28
KQU 594	Eureka	26
KQU 378	Lake Tahoe	26 & 28

HIGH SEAS WEATHER FACSIMILE BROADCAST SCHEDULE AND FREQUENCIES

Broadcast Station: USCG CAMSPAC San Francisco, CA (NMC)
 Coverage: Eastern & Central Pacific Ocean

GMT	Frequencies (kHz)	Broadcast Content
0145	4344.1, 8680.1, 12728.1, 17149.3	TEST PATTERN
0149		0000Z Surface Forecast
0200		0000Z Sea Forecast
0300	4344.1, 8680.1, 12728.1, 17149.3	TEST PATTERN
0304		Sea Surface Temperature Analysis
0315		Sea Surface Temperature Analysis
0326		Satellite Analysis
0339		Satellite Analysis
0500	4344.1, 8680.1, 12728.1, 17149.3	TEST PATTERN
0504		0000Z Surface Analysis
0515		Extended Surface Forecast
0526		Sea Surface Temperature Analysis – East Pacific
1500	8680.1, 12728.1, 17149.3, 22527.0	TEST PATTERN
1503		Satellite Picture
1515		Satellite Picture
1715	8680.1, 12728.1, 17149.3, 22527.0	TEST PATTERN
1719		1200Z Tropical Analysis
1730		1200Z Surface Analysis
1741		Satellite Picture
2015	8680.1, 12728.1, 17149.3, 22527.0	TEST PATTERN
2019		RadioFax Schedule
2030		500MB Maximum Winds
2041		Satellite Picture
2330	8680.1, 12728.1, 17149.3, 22527.0	TEST PATTERN
2334		1800Z Tropical Analysis
2345		1800Z Surface Analysis

CHAPTER 3

VESSEL TRAFFIC SAFETY

TRAFFIC SEPARATION SCHEME

To increase the safety of navigation, routes incorporating traffic separation lanes have, with the approval of the International Maritime Organization (IMO), been established offshore California. These routes are known as Traffic Separation Schemes (TSS). The objective of a TSS is to reduce the risk of collision in converging areas, dense traffic areas, or where restricted sea room limits freedom of movement of shipping. Rule 10 of the International Regulations for Preventing Collisions at Sea (1972) makes compulsory procedures respecting traffic separation schemes which had previously only been recommended for vessels in or near these schemes. These routes are illustrated on all current National Ocean Survey charts.

LOS ANGELES / LONG BEACH / SANTA BARBARA CHANNEL TSS

An IMO approved TSS has been established from Point Conception to the Precautionary Area in San Pedro Bay, thence southward into the Gulf of Santa Catalina.

OFFSHORE SAN FRANCISCO BAY TSS

An IMO approved TSS has been established offshore San Francisco. The TSS consists of four sets of lanes: the northern approach lanes which extend south from Point Reyes to the Precautionary Area; the western approach lanes which extend east from south of the Farallon Islands to the Precautionary Area; the southern approach lanes which extend north from a point off Half Moon Bay to the Precautionary Area; and the main ship channel which extends east from the Precautionary Area toward the Golden Gate Bridge. The Precautionary Area is centered at the San Francisco Entrance Buoy "SF" and is approximately 6nm in radius.

INSHORE SAN FRANCISCO BAY TSS

An inshore TSS was established in San Francisco Bay in 1972. However, for purposes of COLREGS rule 10, this scheme has not been adopted by IMO. The TSS runs from the main ship channel through the bay north to Carquinez Strait and south to anchorage

9 below the San Francisco–Oakland Bay Bridge. Vessels greater than 300 gross tons should adhere to the TSS as much as possible. Any intention to proceed contrary to the TSS should be made known to Vessel Traffic Service (VTS) as far in advance as possible to permit notification of other vessels.

There are four situations where it is commonly agreed that safety dictates a vessel (greater than 300 gross tons) proceed contrary to the TSS as follows:

- (1) Vessels inbound to Oakland frequently use the D–Espan of the Bay Bridge to facilitate "shaping up" for the Oakland Bar Channel. VTS will advise if "conflicting" traffic is present in which case the vessel can wait until the lane is clear or use the established inbound lane through the Bay Bridge A–B span.
- (2) Vessels proceeding inbound whose draft is greater than 40 feet frequently use the "Deep-Draft Route". This route is a radical deviation from the TSS and frequently alarms recreational boaters. Once past the Golden Gate Bridge the deep-draft vessel (proceeding inbound) crosses over into the outbound lane, passing north of Harding Rock and Alcatraz Island, thereafter turning north toward Richmond or southeast toward Oakland.
- (3) Vessels departing from Piers 27 – 45 along the San Francisco waterfront will initially proceed outbound (westward) in the inbound (eastward) lane passing south of Alcatraz Island. Once west and clear of Alcatraz the vessel will cross over into its proper lane and continue outbound.
- (4) Vessels departing from Piers 30 – 50 along the San Francisco waterfront will initially proceed outbound (northward) in the inbound (southward) lane using A–B or B–Cspan of the Bay Bridge. Once clear of the bridge the vessel will cross over in to its proper lane leaving Blossom Rock to port and continue outbound.

RULE 10: TRAFFIC SEPARATION SCHEMES

- a) This rule applies to traffic separation schemes adopted by the Organization and does not relieve any vessel of her obligation under any other rule.
- b) A vessel using a traffic separation scheme shall:
 - (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;

- (ii) so far as practicable keep clear of a traffic separation line or separation zone;
- (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from the side shall do so at as small an angle to the general direction of traffic flow as practicable.
- c) A vessel shall, so far as practicable, avoid crossing traffic lanes but if obligated to do so shall cross on a heading as nearly as practicable to right angles to the general direction of traffic flow.
- d) Inshore traffic zones shall not normally be used for through traffic which can safely use the appropriate traffic lane within the adjacent traffic separation scheme.
- e) A vessel, other than a crossing vessel, shall not normally enter a separation zone or cross a separation line except:
 - (i) in cases of emergency to avoid immediate danger;
 - (ii) to engage in fishing within a separation zone.
- f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.
- g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.
- h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.
- i) A vessel engaged in fishing shall not impede the passage of any vessel following in the traffic lane.
- j) A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power driven vessel following a traffic lane.

LOS ANGELES / LONG BEACH MARINE EXCHANGE VESSEL TRAFFIC INFORMATION SERVICE

The objective of this service provided by the Marine Exchange (private organization) is to enhance vessel safety within the main approaches to the Ports of Los Angeles and Long Beach. Use of the service is voluntary. All inbound vessels may upon entering the **precautionary area**, and preferably when exiting the sealanes, voluntarily report their positions and destinations to the Marine Exchange (call sign KGW-299), on VHF FM channel 13 and may request information relative to arrivals or departures they may encounter in the **precautionary area**. Likewise,

outbound vessels may, upon departing the breakwater, advise the Marine Exchange of their intentions and report their destinations. They may also request information relative to traffic they may encounter in the **precautionary area** as they leave the ports. Vessel arrival and departure information given by the Marine Exchange is phrased in an advisory sense, and will be limited to the following:

- 1) the arriving/departing vessels names, if known;
- 2) for arrivals, the port to which the vessel is bound (Los Angeles or Long Beach);
- 3) for departures, the port from which the vessel is sailing, (Los Angeles or Long Beach) and the scheduled next port of call if known.

If after arrival/departure information has been given to a requesting vessel, new data is received which the Marine Exchange feels the vessel should be aware of, the Marine Exchange may attempt to contact the vessel and update same. However, this is not required, and basically the duty of the Marine Exchange is to pass along only the information listed above when requested by vessels in the area. If a vessel requests courses, bearings, distances, or other navigational information, the Marine Exchange will reply that he is not authorized to give navigational information. The use of this vessel traffic information service is entirely voluntary. However, the Coast Guard strongly endorses the program. In the interests of safety and prudent seamanship, all vessels are encouraged to take full advantage of and participate in the program.

REGULATED NAVIGATION AREA, SAN PEDRO BAY

The Coast Guard has created a Regulated Navigation Area (RNA) in San Pedro Bay in order to enhance vessel safety for vessels entering or departing the ports of Los Angeles and Long Beach. The RNA is described in 33 CFR 165.1109 and is shown on National Ocean Service Charts 18749 and 18751 and encompasses the Los Angeles and Long Beach Pilot Areas located at the entrance to Angels Gate and Queens Gate respectively. Every vessel entering the pilot areas shall pass directly through without stopping or loitering unless stopping is necessary to embark or disembark a pilot. Except in certain circumstances, no self-propelled vessel of 300 gross tons or more, no vessel certified to carry fifty or more passengers, and no towing vessel of 27 feet or more in length may enter Commercial Anchorage

G (outside the middle breakwater) while transiting into or out of Angels or Queens Gate.

Boaters commonly use Los Angeles and Long Beach Sea Buoys as turning points in races and during day cruises. This practice has resulted in a number of close quarters situations with large commercial vessels. The Coast Guard's intent in creating the RNA is to prohibit the use of these buoys as turning points.

POINT ARGUELLO, SHIP TRAFFIC WARNING SYSTEM

A ship traffic warning system has been installed on Texaco's platform Harvest (34°27'19.9"N, 120°48'04.1"W) for the purpose of monitoring vessel traffic and notifying ships of the locations of the Point Arguello drilling platforms at the northern entrance of Santa Barbara Channel. The system is operated jointly by Chevron USA and Texaco USA and covers the three Point Arguello platforms; Harvest (Texaco), Hermosa (Chevron), and Hidalgo (Chevron). The system will operate 24 hours a day. Attempts will be made to establish radio communications with all unidentified vessels approaching the Point Arguello platforms. If a vessel does not acknowledge the radio calls from Platform Harvest, an oil spill response vessel, which is permanently stationed in the field, will be dispatched to intercept the approaching vessel and warn it of the location of the platforms. All vessels passing within ten nautical miles of the three Point Arguello Platforms are requested to respond to the radio calls from Platform Harvest and identify the vessel name.

SAN FRANCISCO VESSEL TRAFFIC SERVICE

The purpose of the U.S. Coast Guard Vessel Traffic Service is to enhance maritime safety by providing the masters and pilots of vessels with up-to-date information on the identifications and intentions of other vessels and to directly relay maritime safety information concerning weather, aids to navigation discrepancies, etc. Participation in the service is voluntary but encouraged for commercial and Naval vessels, as the quality of information available from the service is largely dependent upon input from participating vessels.

The Vessel Traffic Service maintains radar surveillance over the seaward approaches to San Francisco and within San Francisco Bay from Point

San Pablo to the San Mateo-Hayward Bridge. A vessel movement reporting system monitors vessel movements beyond the radar coverage area as far inland as Stockton and Sacramento. The Vessel Traffic Service, call sign "SAN FRANCISCO TRAFFIC" maintains a continuous guard on channel 13 (156.65 MHz) the Bridge-to-Bridge radiotelephone frequency; channel 16 (156.8 MHz), the national distress, safety, and calling frequency; and channel 12 (156.60 MHz). After communications have been established, the abbreviated call sign "TRAFFIC" may be used.

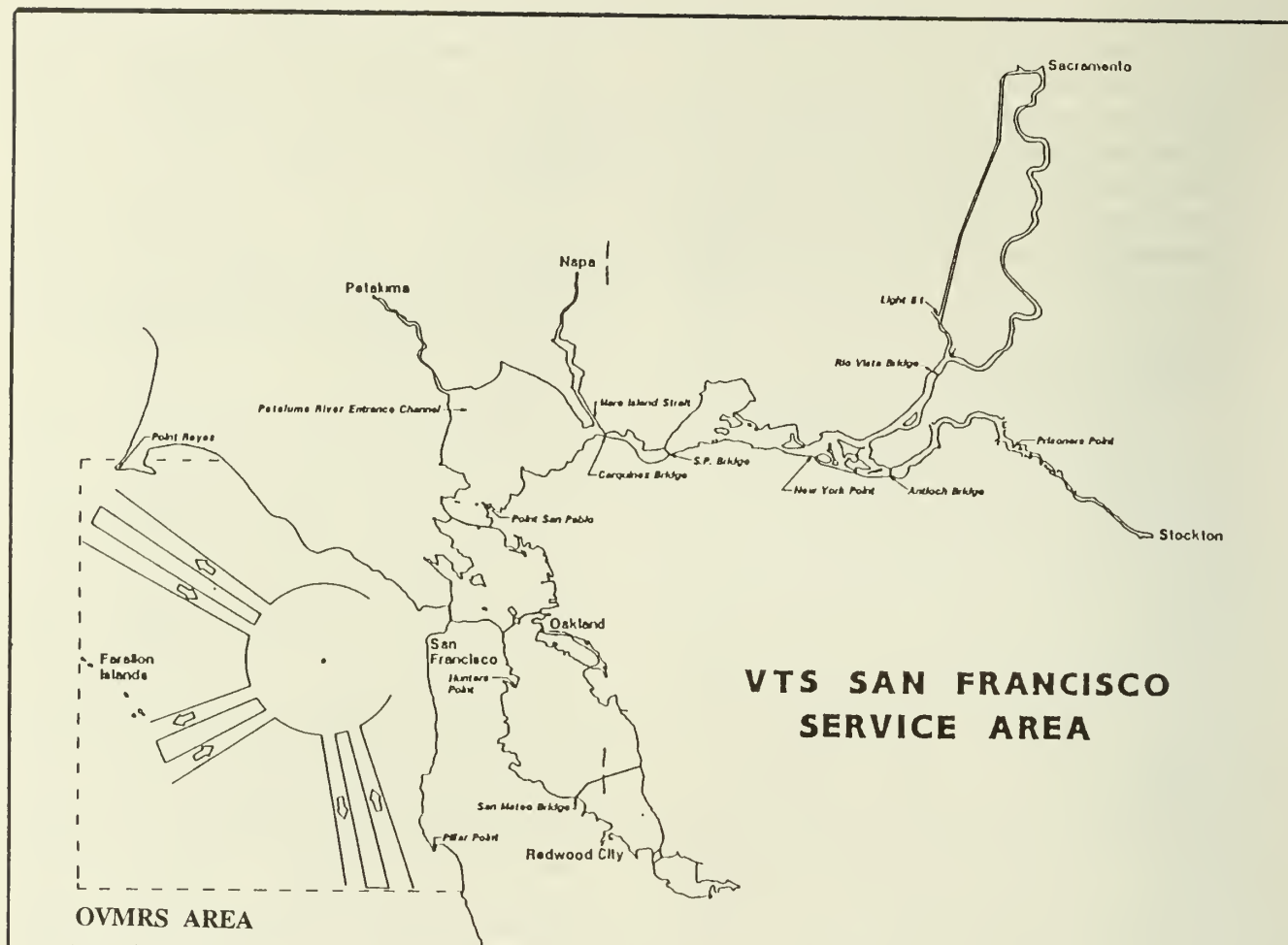
Masters and pilots should inform Vessel Traffic Service when entering the system, or when preparing to get underway within the system, of their destinations, routes, pilot designators, deepest drafts, and other significant information. They also should advise of any changes in status as they occur. The Vessel Traffic Service may request position reports in those areas beyond radar coverage or anywhere within the system in the event of radar malfunction.

The Vessel Traffic Service is designed primarily for use by large vessels which are subject to the Bridge-to-Bridge Radiotelephone Act and all ferry boats carrying passengers for hire. Recreational boaters are not encouraged to "check in" to the system. However, recreational boaters with channel 13, by maintaining a listening watch on that frequency, can be aware of the movements of ships and tugs throughout the San Francisco Bay and Delta. Recreational boaters should also bear in mind that in an emergency situation they are most likely to make contact with a commercial vessel on channel 13 since it is the pilots' working frequency.

The fact that Vessel Traffic Service continuously monitors channel 12 and 13, provides all users of the waterways (including recreational boaters) with an alternative source of information and assistance should an emergency develop and attempts to contact the Coast Guard on Channel 16 prove unsuccessful. The Vessel Traffic Service can shift to (but does not monitor) VHF-FM channels 18A, 21A, and 22A.

Details and instructions for participating in the system are contained in VTS Publication 16630.3: Operating Procedures, San Francisco Vessel Traffic Service. It is available from:

Commanding Officer Telephone (415) 556-2950
Coast Guard Vessel Traffic Service
Yerba Buena Island
San Francisco, CA 94130-5078



ANCHORING IN SAN FRANCISCO BAY

Regulations in Title 33, Code of Federal Regulations, Section 110.224 prohibit vessels from anchoring in the navigable waters of San Francisco Bay and specified major tributaries in other than designated anchorage areas except in case of emergency or with the written permission of the Captain of the Port. Restrictions concerning vessel type, use, location, or time limits apply to certain anchorages. Where the regulations require that the Captain of the Port be notified upon anchoring or upon departure, such reports may be transmitted to the Vessel Traffic Service.

OFFSHORE VESSEL MOVEMENT REPORTING SYSTEM

On December 1st, 1986, the Coast Guard began operating the Offshore Vessel Movement Reporting System (OVMRS), an advisory service to inform

mariners of the movements of deep-draft vessels in the ocean approaches to San Francisco Bay. In no way should the institution of the OVMRS lead any mariner to believe it is a substitute for the Rules of the Road and prudent seamanship. The OVMRS is simply an additional tool to assist mariners in complying with their responsibilities.

OVMRS is a voluntary system which can aid in detecting potential close encounters and can improve communication by providing the names of transiting deep-draft vessels.

Although participation is voluntary, the Coast Guard urges all vessels transiting the waters within the OVMRS area to participate as follows:

Vessels over 300 gross tons (referred to as deep-draft vessels) and vessels with tows should actively participate by reporting their movement to the Coast Guard VTS. All vessels should listen to the VTS broadcast of deep-draft vessels transiting their areas

and should navigate and communicate appropriately; and should identify their vessel and intentions to approaching vessels.

OVMRS AREA

The OVMRS applies to vessels transiting ocean waters within a 38-nautical-mile radius of Mount Tamalpais (37°55.8'N, 112°34.6'W). The distances of this radius from the San Francisco Approach Lighted Horn Buoy (or LNB for Large Navigation Buoy), U.S. Coast Guard Light List No. 360; (37°45'N, 122°41.5'W) measured seaward beyond each of the three charted Traffic Separation System lanes are: Northern, 41 nautical miles; Main (Western), 29 nautical miles; and Southern, 29 nautical miles.

RESPONSIBILITIES OF DEEP-DRAFT VESSELS

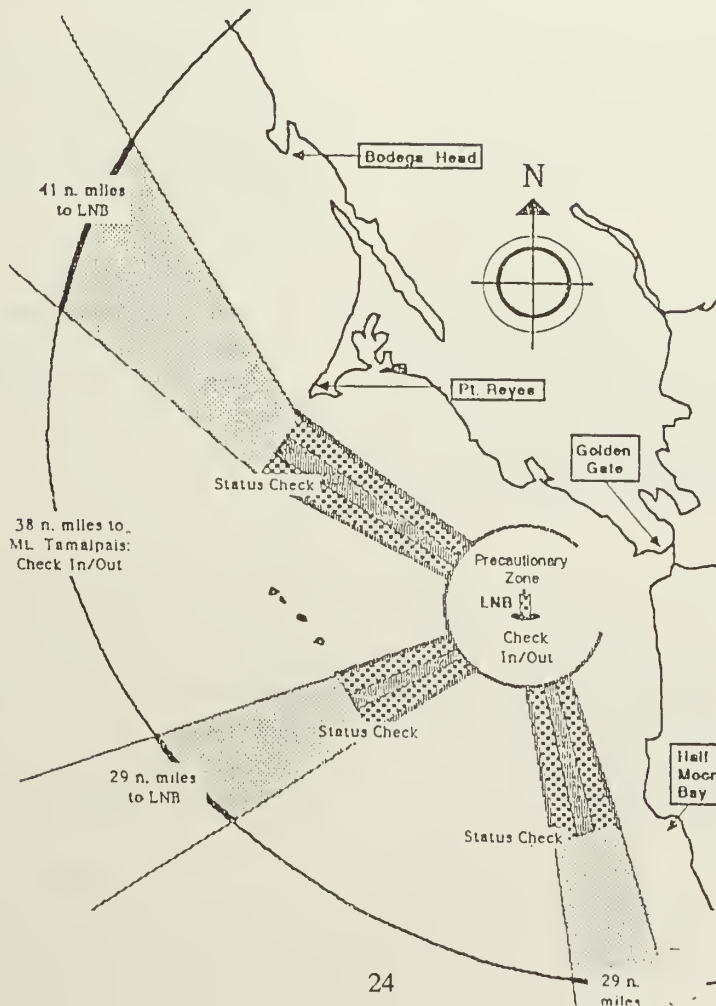
Before entering the OVMRS area from sea or from San Francisco Bay, a deep-draft vessel calls the Coast Guard's San Francisco Vessel Traffic Service on channel 12. The vessel reports its type, name, position, route, speed, and estimated time of arrival at either the LNB (if the vessel is inbound) or the

seaward limit of the OVMRS (if the vessel is outbound). VTS will broadcast this report. Upon reaching the seaward end of one of the Traffic Separation System lanes, approximately halfway in the transit, the vessel reports an update of its progress to VTS. VTS will broadcast the status of all participating deep-draft vessels on channel 12 every 30 minutes, on the quarter hour (i.e. 0015 and 0045).

RESPONSIBILITIES OF ALL VESSELS

By monitoring the radio transmissions of vessels reporting into the OVMRS, as well as scheduled broadcasts, listeners will be informed of participating deep-draft vessel movements. Every vessel should communicate its identity and intentions to other vessels operating in its vicinity. The OVMRS is only an information service. The conduct of mariners will still be governed by agreements reached by communicating between vessels, by good seamanship, and by the International Rules of the Road.

The chartlet below shows the OVMRS Area



NAVIGATION RULES FOR NARROW CHANNELS

INTERNATIONAL

Steering and Sailing Rules

RULE 9

Narrow Channels

(a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e)(i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(i). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(ii) and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d).

(ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

INLAND

Steering and Sailing Rules

RULE 9

Narrow Channels

(a)(i) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(ii) Notwithstanding paragraph (a)(i) and Rule 14(a), a power-driven vessel operating in narrow channels or fairways on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel shall use the danger signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e)(i) In a narrow channel or fairway when overtaking, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c) and take steps to permit safe passing. The overtaken vessel, if in agreement, shall sound the same signal. If in doubt she shall sound the danger signal prescribed in Rule 34(d).

(ii) This rule does not relieve the overtaking vessel of her obligation under Rule 13.

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Every vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

NARROW CHANNELS IN SAN FRANCISCO BAY

The Captain of the Port, San Francisco Bay considers the following areas to be "narrow channels or fairways" for the purpose of enforcing the International and Inland Rules of the Road.

The listing of "narrow channel or fairway" areas provided below is not intended to be exhaustive. Rather, it identifies deepdraft navigation areas where commercial and public vessels routinely operate and where small craft can impede the safe transit of larger vessels if care is not exercised.



The "narrow channels or fairways" include:

- 1) All one-way traffic lanes and precautionary zones in the San Francisco Bay eastward of the San Francisco Approach Lighted Horn Buoy SF (LLNR 360);
- 2) South San Francisco Bay Channels between the

termination of the Traffic Separation Scheme in the vicinity of San Francisco Bay South Channel Lighted Buoy 1 (LLNR 4820) and Redwood Creek Entrance Light 2 (LLNR 5180);

- 3) Redwood Creek between Redwood Creek Entrance Light 2 (LLNR 5180) and Redwood Creek Daybeacon 21 (LLNR 5265);
- 4) Pinole Shoal Channel in San Pablo Bay between the termination of the Traffic Separation Scheme at San Pablo Bay Channel Light 7 (LLNR 5900) and the Carquinez Strait Highway Bridge;
- 5) Carquinez Strait between the Carquinez Strait Highway Bridge and the Benicia-Martinez Highway Bridge;
- 6) Suisun Bay Channels between the Carquinez Strait Highway Bridge and Suisun Bay Light 34 (LLNR 6655);
- 7) New York Slough between Suisun Bay Light 30 (LLNR 6585) and Point Beemer Light (LLNR 6660);
- 8) San Joaquin River from Point Beemer Light (LLNR 6660) to the Port of Stockton;
- 9) Sacramento River Deep Water Ship Channel from Suisun Bay Light 34 (LLNR 6655) to the Port of Sacramento;
- 10) Oakland Outer and Inner Harbor Entrance Channels;
- 11) Alameda Naval Air Station Channel;
- 12) Southampton Shoal Channel;
- 13) Richmond Harbor Entrance Channel;
- 14) Mare Island Strait between Mare Island Strait Light 2 (LLNR 6095) and Mare Island Causeway Bridge.

RULES OF THE ROAD ENFORCEMENT

Timely reporting and enforcement of Rules of the Road infractions can promote safer navigation. Vessel masters, pilots, and operators are encouraged to report incidents which merit investigation. Reports received will be fully investigated and may result in license suspension or revocation proceedings or the assessment of civil penalties as appropriate. Reports should include name, registration, and descriptive information about your vessel and the other vessel; the exact location of the incident; the circumstances of the reported violation; and names and positions of persons/vessels witnessing the incident. Reports should be submitted to the nearest Coast Guard Marine Safety Office as follows:

Commanding Officer
Coast Guard Marine Safety Office
2710 N. Harbor Dr.
San Diego, Ca 92101-1064
Phone: (619) 557-5860

Commanding Officer
Coast Guard Marine Safety Office
Coast Guard Island
Alameda, CA 94501-5100
Phone: (415) 437-3073

Commanding Officer
Coast Guard Marine Safety Office
165 N Pico Ave.
Long Beach, Ca 90822-1096
Phone: (213) 499-5500

CHAPTER 4

AIDS TO NAVIGATION

CAUTIONARY INFORMATION REGARDING AIDS TO NAVIGATION

The aids to navigation depicted on charts comprise a system consisting of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid.

The buoy symbol is used to indicate the approximate position of the buoy body and the sinker which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain, and the fact that buoy body and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of ice or other natural causes, collisions or other accidents.

For the foregoing reasons, a prudent mariner must not rely completely upon the position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

REPORTING DANGERS TO NAVIGATION

Mariners will occasionally discover uncharted shoals, malfunctions of important navigational aids, or other dangerous situations which should be made known to other navigators. In addition to broadcasting a safety message addressed CQ (to all ships), those items which can be classified as urgent should be reported via radio to the closest responsible charting authority.

Defense Mapping Agency Hydrographic Topographic Center (DMAHTC) additionally requests

the reporting of such urgent navigational data directly to its Washington, D.C. office via any U.S. Government radio station. General criteria for important data is "that information, without which, a mariner might expose his vessel to unnecessary danger." Follow up letter reports are encouraged to provide DMAHTC additional evaluation background. The initial report should be broadcast on 500 kHz prefixed by the safety signal, "three repetitions of the group TTT." It should be brief, but must contain

- 1) What - Description of danger.
- 2) When - GMT and date.
- 3) Where - Latitude and Longitude. (Reference chart in use)
- 4) Who - Reporting vessel and observer.

Additional guidance in preparing a report of navigational information is contained in Pub. 606, Guide to Marine Observing and Reporting, and in 117A and 117B, Radio Navigational Aids.

REQUIRED REPORTING OF DAMAGED U.S. AIDS TO NAVIGATION

It frequently occurs that aids to navigation are collided with, causing damage and displacement, or complete loss, without the knowledge of the Coast Guard. The replacement or repair of such aids is consequently often not made as promptly as desired. This situation results in diminished protection for marine traffic, and is attributable in large part to the failure of vessel operators to furnish notice of these collisions to the nearest Coast Guard unit, as required by law and regulations. The prompt submission of notice of any marine casualty or accident, including damage or



destruction to aids to navigation is required by the Marine Investigation Regulations, Section 4.05-20 of Title 46, Code of Federal Regulations, with penalty for noncompliance.



CGC BLACKHAW tending San Francisco Large Navigational Buoy "SF"

VANDALISM OF AIDS TO NAVIGATION

Frequently Coast Guard operated aids to navigation are damaged, defaced, or destroyed by vandals. This type of irresponsible activity may create a serious safety hazard for the mariner. The primary targets for vandals are usually buoys and lights on structures located on the end of jetties and breakwaters. Federal laws provide that those apprehended defacing or destroying a federal aid to navigation shall be guilty of a misdemeanor and are subject to a fine of up to \$2500 or not less than \$500 or imprisonment or both. Those providing information leading to a conviction may be paid one half of such a fine. All citizens are requested to report sightings of any vandalism to the nearest Coast Guard unit or by calling Eleventh Coast Guard

District Operations Center at (213) 499-5380.

PRIVATE AIDS TO NAVIGATION

A private aid to navigation is any aid to navigation (i.e. light, buoy, daybeacon, mooring, marker, etc.) operated in the navigable waters of the United States, other than those operated by the Federal Government. Federal Regulations prohibit any person from establishing, maintaining, discontinuing or changing ownership of any aid to navigation without first obtaining permission to do so from the U.S. Coast Guard. To establish and maintain a private aid to navigation, an application (CG-2554) must be completed and submitted to the U.S. Coast Guard. Applications are available by writing or calling:

**Commander (oan)
Eleventh Coast Guard District
400 Oceangate
Long Beach, CA 90822-5399
Phone (213) 499-5410**

Once approved and established, a private aid must be maintained in conformance with its approved characteristics described on the Private Aids to Navigation Application. Private Aids are subject to inspection/verification by the Coast Guard and Coast Guard Auxiliary at any time and without prior notice. The Coast Guard Auxiliary is authorized and provides verification surveys of private aids. Auxiliary staff officers also work in the Aids to Navigation & Waterways Management Branch to contact private aid owners, advising them of discrepancies found during verification surveys.

Private aids to navigation lawfully maintained are entitled to the same protection against interference or obstruction as is afforded by law to Coast Guard Aids to Navigation. Any person obstructing or interfering with an authorized private aid to navigation shall be deemed guilty of a misdemeanor and shall be subject to a fine not exceeding the sum of \$500.00 for each offense (33 CFR 70.01).

RADIOBEACONS

A radiobeacon is a short range navigational aid which provides a line of position to vessels equipped with radio direction-finder (RDF) sets. Radiobeacons have ranges from 10 to 175 nautical miles. Although bearings can be obtained at greater ranges they may be of doubtful accuracy and should be used with caution. Extensive changes to the radiobeacon system are planned this year. Information will be provided in the Local Notice To Mariners. It is recommended that this list be corrected as chart and publication changes are made.

FREQ (kHz)	STATION	CHARAC.	RANGE	LAT.(N)	LONG.(W)
285	NEWPORT BAY	NE (-. .)	15	33°35'18"	117°52'43"
286	PIGEON POINT	PI (-.. .)	40	37°10'51"	122°23'34"
288	SAN LUIS OBISPO	SL (... -.)	20	35°09'37"	120°45'34"
289	MARINA DEL REY	MR (-- .-.)	10	33°57'46"	118°27'40"
290	POINT PINOS	P (-..)	10	36°38'00"	121°55'58"
292	DANA POINT	DP (-.. -..)	15	33°27'16"	117°41'26"
292	POINT REYES	R (-.)	10	37°59'44"	123°01'19"
292	TRINIDAD HEAD	TR (- .-.)	15	41°03'07"	124°09'01"
294	SANTA BARBARA	SB (... -..)	10	34°24'24"	119°41'36"
294	SANTA CRUZ HARBOR	SC (... -..)	10	36°57'39"	122°00'03"
296	LONG BEACH	LB (-.. -..)	10	33°43'24"	118°11'09"
296	POINT BONITA	B (-..)	10	37°48'56"	122°31'42"
298	MOSS LANDING HBR.	ML (-- .-.)	10	36°48'24"	121°47'15"
300	HUMBOLDT BAY	H (....)	50	40°46'06"	124°13'09"
305	SAN FRANCISCO APPROACH LIGHTED HORN BUOY "SF" (LNB)	SF (... -..)	15	37°45'00"	122°41'30"
307	AVALON	AV (-. -..)	10	33°20'56"	118°19'29"
307	FORT BRAGG	N (-.)	20	39°25'51"	123°48'29"
308	CHANNEL ISLAND	CI (-. . .)	10	34°09'22"	119°13'35"
310	MORRO BAY	MB (-- -..)	15	35°22'03"	120°52'03"
314	FARALLON ISLAND	F (-..)	50	37°41'57"	123°00'02"
314	VENTURA MARINA	VM (... --)	15	34°14'46"	119°16'10"
316	CRESCENT CITY	C (-..)	20	41°44'30"	124°11'02"
317	MISSION BAY	MB (-- -..)	15	32°45'30"	117°15'22"
317	PIEDRAS BLANCAS	PB (-.. -..)	30	35°39'54"	121°17'06"
319	REDONDO BEACH	RB (-. -..)	15	33°50'30"	118°23'34"
320	POINT ARENA	A (-.)	50	38°57'17"	123°44'22"
322	POINT SUR	S (...)	50	36°18'22"	121°54'02"
323	ANACAPA ISLAND	AN (-. -.)	10	34°00'57"	119°21'31"
323	OCEANSIDE	OC (--- -..)	10	33°12'25"	117°23'55"
325	CRESCENT CITY	C (-..)	20	41°44'30"	124°11'02"
325	BODEGA HEAD	BO (-.. ---)	20	38°18'39"	123°03'52"
325	LOS ANGELES LIGHT	LA (-.. -.)	10	33°42'30"	118°15'02"

SEQUENCED RADIO BEACONS

302	I-IV POINT LOMA	L (-..)	150	32°39'58"	117°14'34"
302	II-V POINT VICENTE	V (...-)	75	33°44'31"	118°24'35"

RACONS

A racon is a radar beacon which produces a coded response in the form of a morse code character on the radar screen, when triggered by a radar signal. They are normally operated in the frequency ranges of the X-band and S-band marine radars. Racons are becoming more prevalent as an aid to navigation to mark bridges or structures that present a significant hazard to navigation. Racons provide radar enhancement, improve aid identification, and help during the transition from ocean to inland navigation. A racon on an aid to navigation assists the mariner in distinguishing that aid from other aids and vessels.

The following racons are maintained in the Eleventh District:

San Francisco Approach Lighted Horn Buoy

SF (LNB), (LLNR 360) RACON: M (--).

Los Angeles Channel

Approach Lighted
Bell Buoy LA, (LLNR 3105) RACON: O (---).

Privately maintained racons permitted in California:

Platform Gail, (LLNR 187) RACON: G (--).

Platform Harmony, (LLNR 197) RACON: K (-.).

Carquinez Strait Bridge

North Channel Racon
"N", (LLNR 6216) RACON: N (-).

Carquinez Strait Bridge

South Channel Racon
"C", (LLNR 6218) RACON: C (-..).

LORAN

An acronym for **LONG RANGE Navigation**, LORAN, is an electronic aid to navigation consisting of shore-based radio transmitters. The Loran system enables users equipped with a Loran receiver to determine their position quickly and accurately, day or night, in practically any weather.

U.S. WEST COAST LORAN-C CHAIN - GRI 9940 (old rate 556)

STATION	FUNCTION	COORDINATES	COODING DELAY/BASE- LINE LENGTH	RADIATED POWER(KW)	REMARKS
FALLON, NV	MASTER	39 53 06.6 N 118 49 56.4 W		400	TWO PULSE COWMS INSTALLED.
GEORGE, WA	WHISKY	47 03 48.0 N 119 44 39.5 W	1100/7 2796.30	1600	TWO PULSE COWMS INSTALLED. DUAL-RATED TO WEST COAST CANADA CHAIN.
MIDDLETOWN, CA	XRAY	38 46 57.0 N 122 29 44.5 W	27000/7 1094.10	400	EXERCISES OPERATIONAL CONTROL OF CHAIN. CONTROL FOR W,X AND Y. TWO PULSE COWMS INSTALLED.
SEARCHLIGHT, NV	YANKEE	35 19 18.2 N 114 48 17.4 W	40000/7 1967.30	540	
NORTH BEND, OR	HON SITE	43 24 36.2 N 124 14 27.9 W			UNMANNED RECEIVER SITE.
PT. PINOS, CA	HON SITE	36 37 59.0 N 121 56 05.6 W			UNMANNED RECEIVER SITE.

LORAN-C CHAINS

The chain designators for Loran-C are 4 digit numbers which indicate the pulse group repetition interval (GRI) in tens of micro-seconds. For example, the West Coast Loran-C chain is designated 9940 and has a GRI of 99400 microseconds.

Loran-C coverage presently exists along the Western Coast of North America from the Bering Sea, southward along the Gulf of Alaska, Western Canada, and the U.S. West Coast down to the Mexico border. World wide Loran-C coverage (including that described above may be found on the Loran-C Coverage Diagram (5130) published by DMAHTC.

LORAN-C RECEIVERS

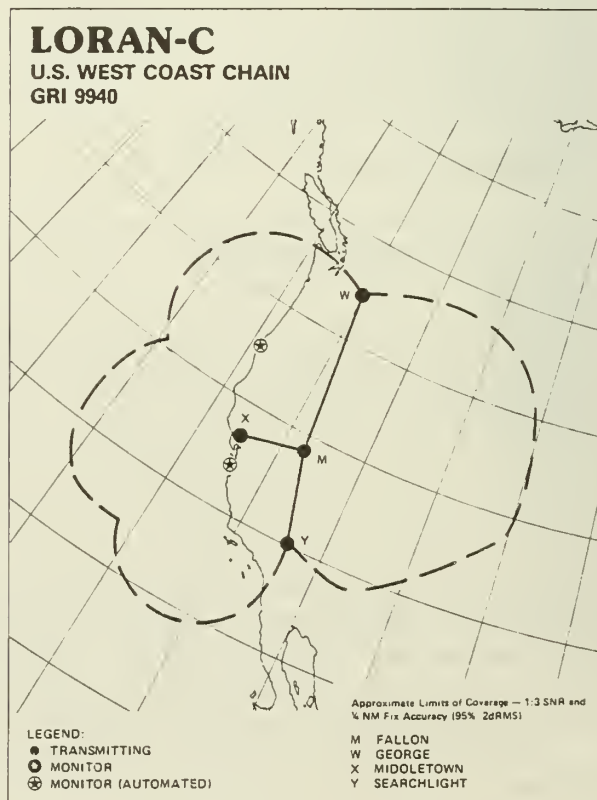
There are many types of Loran-C receivers available. They employ various techniques for acquiring and tracking the Loran-C signals indicating the time difference or position information to the user. A Loran-C receiver which will be useful to the limits of the Coast Guard's advertised Loran-C coverage for the U.S. Coastal Confluence Zone, and which is capable of measuring position with the accuracy which is advertised for Loran-C, has the following characteristics:

- 1) It acquires the Loran-C signals automatically, without the use of an oscilloscope.
- 2) It identifies master and secondary ground-wave pulses automatically, and accomplishes cycle matching on all eight pulses of each master-secondary pair used.

- 3) It tracks the signals automatically once they have been acquired.
- 4) It displays two time-difference readings, to a precision of at least one-tenth of a microsecond.
- 5) It has notch filters to minimize the effect of radio frequency interference in the area of its operation.
- 6) It automatically detects blink and alerts the operator. Blink is a condition of blinking on and off the first two of the eight pulses of a secondary station to indicate an out of tolerance condition for that master-secondary pair.

YOUR TELEVISION RECEIVER MAY BE HAZARDOUS TO YOUR LORAN-CRECEIVER'S HEALTH

Black and white television receivers utilize a horizontal picture scanning frequency of about 15.750 kHz (color sets have a slightly lower frequency). The oscillators used to produce these scanning frequencies are simple devices with little or no shielding and no band limiting to reduce harmonics. Many harmonics (multiples) of a basic frequency are produced and are sometimes radiated by the receiver's antenna system. Two particularly troublesome harmonics for LORAN-C receivers are at about 94.5 kHz (6th harmonic) and 101.25 kHz (7th harmonic). Since the LORAN-C signals



occupy the band between 90 and 110 kHz, a correctly designed LORAN-C receiver will accept these TV oscillator harmonics. If the level of the unwanted signals is high enough, the signals may produce erratic LORAN-C receiver performance. You, or your marine electronic dealer, can easily determine whether you have this problem by observing the performance of the LORAN-C receiver with the TV set turned on and turned off.

LORAN-C USER HANDBOOK

Copies of the LORAN-C Users Handbook are stocked and available through the Government Printing Office (GPO) at the following address:

**Superintendent of Documents
Order Section**

**U.S. Government Printing Office
Washington, D.C. 20402**

Telephone: (202) 783-3238.

The stock number is 050-012-00171-5, and the handbook is currently priced at \$4.75 per copy.

OMEGA NAVIGATION

OMEGA is a very low frequency radio navigation system operating in the frequency band between 10 and 14 kHz. OMEGA differs from LORAN by using very low frequency and phase difference measurements. The very low frequency transmissions and well defined propagation patterns make OMEGA available all over the world through the operation of only eight stations. The OMEGA navigation system was developed by the United States and is being operated in partnership with other nations. The eight permanent station locations and their letter designators are: Norway (Station A), Liberia (Station B), Hawaii (Station C), North Dakota (Station D), France (Station E), Argentina (Station F), Australia (Station G) and Japan (Station H).

The OMEGA system is designed to provide position fixing accuracy of 4 nautical miles, 95% of the time for aircraft and ships, continuously and in all-weather.

THE OMEGA RECEIVERS

The OMEGA LAT/LONG receiver will automatically interpret OMEGA signal information and provide a direct readout of current LAT/LONG coordinates. There are several basic requirements which are common to all OMEGA receivers. These requirements are the capability to:

- 1) Select one or more OMEGA frequencies and reduce, by appropriate filtering, the intrusion of background noise.
- 2) Identify, through controlled sequential switching, the source station of the various signal frequencies

as they are received.

- 3) Measure the relative phase of the OMEGA navigation signals received from designated station pairs.

Marine OMEGA receivers vary in price depending on the degree of sophistication and the ease of operation desired by the user. Marine receivers generally use a whip antenna with a coupler assembly. Marine receivers have the following basic characteristics:

- 1) Digital display readout;
- 2) Operating frequency -10.2 kHz standard; with other frequencies optional;
- 3) Synchronization - manual, semi-automatic, or fully automatic; and
- 4) Internal battery for emergency backup power.

The OMEGA user simply initiates his automatic receiver and plots his position in longitude and latitude.

OMEGA USERS GUIDE

Copies of the OMEGA Users Guide are available free of charge by writing:

**Commandant (G-NRN)
United States Coast Guard
2100 2nd Street
Washington, D.C. 20593-0001
Limit one per order.**

GLOBAL POSITIONING SYSTEM (GPS)

The Global Positioning System (GPS) is a navigation system which will provide precise, worldwide, three dimensional navigation capabilities. The system was designed for military applications, however merchant, recreational and fishing vessels can



OMEGA station locations worldwide

use it. The GPS Standard Positioning Service (SPS) is available to mariners using a variety of commercial receivers.

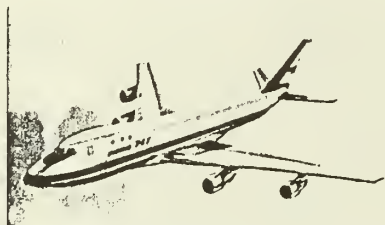
The GPS will use a network of 24 satellites (21 operational and 3 spares) when the system is fully operational. The satellites are placed in one of 6 precisely spaced orbital planes. The satellites complete a circular 10,900 mile orbit of the earth once every 12 hours. Ideally, four satellites will be visible from any position on the earth and will provide instantaneous position information. By comparing ranges to each satellite, a GPS-SPS receiver will provide positions with a horizontal accuracy of approximately 100 meters. The basic one channel receivers available for

civilian use produce continuous fixes at 30 second intervals. More sophisticated multi-channel receivers which receive information from four satellites simultaneously have been designed for aircraft and other high speed vehicles.

The GPS system is scheduled to be operational for two dimensional navigation by 1991. Three dimensional coverage is expected by late 1993. Because only a handful of satellites are now in orbit, current coverage is limited to a few hours each day. In the next century GPS will ultimately supplant one or more less accurate radionavigation systems such as LORAN-C, OMEGA, VOR/DME/TACAN and NAVSAT.

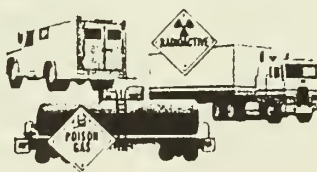
GPS CIVIL APPLICATIONS

Air Navigation



- Non Precision Approach/Landing
- Oceanic En Route
- Domestic En Route
- Terminal
- Remote Areas
- Helicopter Operations

Land Navigation



- Vehicle Monitoring
- Schedule Improvement
- Minimal Routing
- Law Enforcement

Maritime Navigation



- Oceanic
- Coastal
- Harbor/Approach
- Inland Waterways

Static Positioning/Timing



- Offshore Resource Exploration
- Hydrographic Surveying
- Aids-to-Navigation
- Time Transfer
- Geophysical Surveying

Space



- Launch
- In-Flight/Orbit
- Reentry/Landing

Search & Rescue



- Position Reporting & Monitoring
- Rendezvous
- Repeatability of Position
- Coordinated Search
- Collision Avoidance



CHAPTER 5

COMMON CAUTIONARY SITUATIONS

MILITARY OPERATIONS

Missile firing, bombing, and other hazardous operations are frequently conducted by the U.S. Armed Forces in the navigable waters of the United States and adjacent coastal waters. Information concerning these operations is disseminated via Local and Broadcast Notices to Mariners when the Coast Guard is advised. Notices will refer to areas, zones, and lanes as shown on National Ocean Survey Charts. If operations are conducted outside of a charted area, zone, or lane, their location will be described by range and bearing from a charted object or

by latitude and longitude.

Although information provided to the Coast Guard is published in Local Notice to Mariners, there may be times when operations may be conducted without the Coast Guard being advised.

Mariners are cautioned that these areas will be extremely hazardous during periods of operations. Inquiries concerning these operations should be made to the controlling agencies indicated below.

AREA	OPERATIONS	SCHEDULE	TELEPHONE	CHARTS
SAN CLEMENTE ISLAND Danger Zones 334.950, 334.960 & 334.970	Shore Bombardment.	Intermittently on a daily basis	(619) 545-1777	18762, 18764
SAN NICOLAS ISLAND Restricted Area 334.980	Missile Testing.	Sector A, C; Daylight hours, Wednesday thru Sunday. Sector B; Infrequently closed.	(805) 989-1470 (805) 989-8841	18720, 18755

The U.S. Navy advises that Naval Restricted Areas at San Nicolas Island will be closed at more frequent intervals. Sectors A and C will normally be closed during daylight hours Wednesday thru Sunday. When Sector A is open, boaters may transit and fish provided they remain underway, maintain radio communications with *PLEAD CONTROL* and do not anchor, dive or engage in bottom dragging. The Bravo sector will remain open except for infrequent closures. Fisherman and boaters desiring closure schedule information should contact the Pacific Missile Test Center Range Surveillance Center at the telephone numbers listed above or call to *PLEAD CONTROL* on VHF-FM channel 16 or 6.

POINT MUGU

Pacific Missile Test Center Sea Test Range	Missile Firing.	Intermittently on a daily basis.	(805) 989-1470 (805) 989-8841	18022, 18720, 18740
---	-----------------	----------------------------------	----------------------------------	------------------------

Vessels may be requested to alter course within the Sea Test Range due to firing operations and are requested to contact *PLEAD CONTROL* on 5081.5 kHz (5080 kHz) or 3238.5 (3237 kHz) secondary or 156.8 MHz (Channel 16 VHF-FM) or 127.55 MHz before entering the Sea Test Range boundaries and maintain continuous guard while within the range. If unable to contact *PLEAD CONTROL* prior to entering or while in the Sea Test Range, relay message through *COAST GUARD SAN FRANCISCO* (NMC) on 500 kHz call up.

Mariners transiting in Southern California waters will create the least danger to their vessels during firing operations if they transit the area via the Santa Barbara Channel within nine miles offshore while in the vicinity of Point Mugu. As an alternate, mariners should cross the area to the southwest of San Nicolas Island between sunset and sunrise. This will improve safety for vessels and reduce the interference with firing operations.

POINT MUGU

Danger Zone 334.1120	Small Arms Firing.	Daily 6:00 AM to 8:30 PM.	(805) 989-8841	18720, 18740
----------------------	--------------------	---------------------------	----------------	--------------

Vessels are requested to remain at least two miles from Point Mugu during the operations.

SAN MIGUEL ISLAND

Danger Zone 334.1140	Missile Firing.	Intermittently on a daily basis.	(805) 989-8841	18721, 18727
----------------------	-----------------	----------------------------------	----------------	--------------

MONTEREY BAY

Danger Zone 334.1150	Small Arms Firing.	Intermittently on a daily basis.	(408) 242-6634	18685
Danger Zone 334.1150	Mine Operations Area.	Intermittently on a daily basis.		18685

SAN PABLO BAY

Danger Zone 334.1160	Target Practice Area.	Intermittently on a daily basis.	Days: (707) 646-2411 Eves: (707) 646-4307	18654
Danger Zone 334.1170	Naval Inshore Operations.	Intermittently.	(707) 646-4210	18654

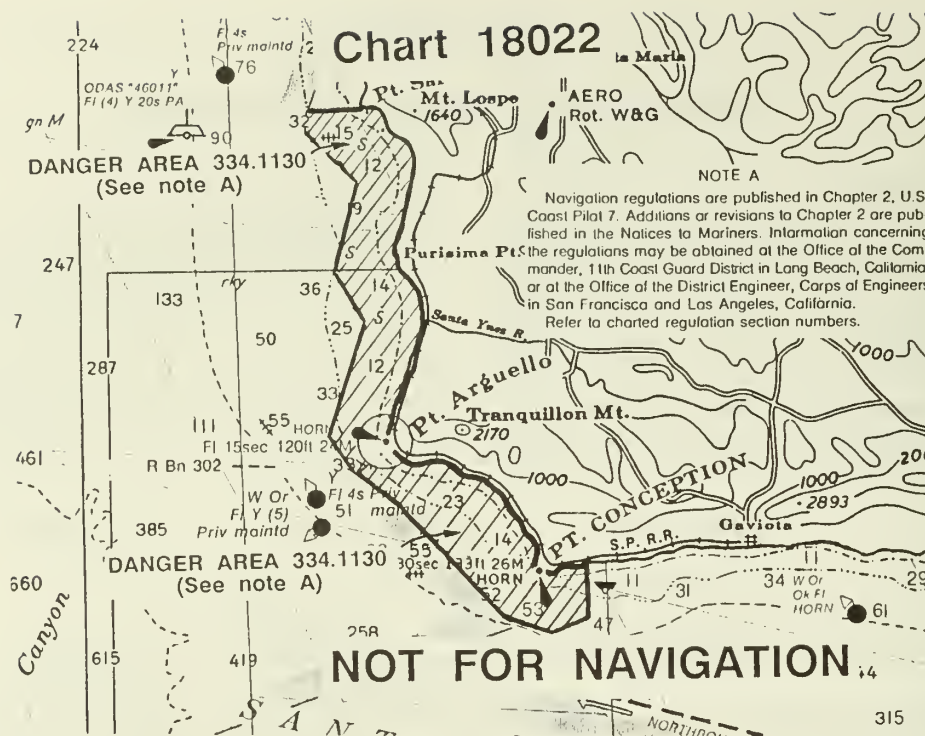
VANDENBERG AIR FORCE BASE

Western Space & Missile Center Danger Zone 334.1130	Missile Firing.	Zones 1 thru 9; Intermittently on a daily basis.	(805) 866-4508 (805) 866-8825	18700
--	-----------------	---	----------------------------------	-------

Mariners are requested to contact *FRONTIER CONTROL* on VHF-FM channel 16 or at the telephone numbers listed above. The Western Space and Missile Center is extensive and as listed above divided into nine zones. This area extends seaward from the shoreline and is bounded by the following coordinates:

a. 34°54'08"N 120°40'15"W (Pt. Sal)	b. 34°54'08"N 120°44'00"W	c. 34°52'48"N 120°44'00"W
d. 34°50'00"N 120°40'30"W	e. 34°44'50"N 120°42'15"W	f. 34°41'50"N 121°40'12"W
g. 34°35'12"N 120°42'45"W	h. 34°33'00"N 120°41'05"W	i. 34°30'41"N 120°37'29"W
j. 34°24'18"N 120°30'00"W	k. 34°23'34"N 120°27'05"W	l. 34°24'21"N 120°24'40"W
m. 34°27'20"N 120°24'40"W	n. 34°54'08"N 120°40'15"W (Pt. Sal)	

Numerical designations refer to paragraph numbers in Title 33 Code of Federal Regulations and in Chapter 2 of the U.S. Coast Pilot 7.



Western Space and Missile Center, Danger Area 334.1130, designated by striped area on chartlet.

The following Military operations are conducted as listed below and published in the LNM on a quarterly basis.

SOUTHERN CALIFORNIA/MEXICO – PACIFIC OCEAN – AIR-TO-AIRGUNNERY OPERATIONS – The U.S. Navy conducts hazardous operations **intermittently on a daily basis** in an area bound by the following coordinates:

- | | |
|---------------------------|---------------------------|
| a. 31°50'00"N 117°49'30"W | b. 31°15'00"N 117°29'30"W |
| c. 31°06'00"N 118°00'30"W | d. 31°04'00"N 118°22'30"W |
| e. 31°43'30"N 118°24'00"W | f. 31°44'30"N 118°10'00"W |

Tactical Maneuvering Areas 2 & 3.

Charts: 18020, 18022 – published in LNM quarterly.

SOUTHERN CALIFORNIA – PACIFIC OCEAN – AIR/SURFACE GUNNERY, MISSILE EXERCISES – The U.S. Navy conducts hazardous operations **intermittently on a daily basis** in an area bound by the following coordinates:

- | | |
|-------------------------|-------------------------|
| a. 32°33.0'N 118°25.0'W | b. 32°35.0'N 118°15.0'W |
| c. 32°35.0'N 117°40.0'W | d. 31°55.0'N 117°40.0'W |
| e. 31°55.0'N 118°25.0'W | f. 32°33.0'N 118°25.0'W |

Fleet Training Area – Hot.

Charts: 18022, 18740, 18765 – published in LNM quarterly.

SOUTHERN CALIFORNIA – SAN CLEMENTE ISLAND – SHORE BOMBARDMENT AREA – The U.S. Navy is conducting hazardous shore bombardment from ship and aircraft near the southern tip of San Clemente Island, **intermittently on a daily basis, Monday thru Sunday**, in an area bound by the following coordinates:

- | | |
|----------------------|----------------------|
| a. 32°55'N, 118°25'W | b. 32°55'N, 118°15'W |
| c. 32°40'N, 118°15'W | d. 32°40'N, 118°35'W |
| e. 32°45'N, 118°35'W | |

Further information on daily schedules can be obtained from Fleet Air Control & Surveillance Facility, Phone: (619) 545-1777 or (619) 545-1778 or by calling *FACSFAC* on channel 16 VHF-FM.

Charts: 18740, 18762, 18764 – published in LNM quarterly.

SOUTHERN CALIFORNIA – SAN CLEMENTE BASIN – GUNNERY OPERATIONS – The U.S. Navy conducts exercises from **sunrise to sunset intermittently on a daily basis** in an area bounded by the following coordinates:

- | | |
|---------------------|---------------------|
| a. 32°35'N 117°45'W | b. 32°35'N 117°40'W |
| c. 32°25'N 117°40'W | d. 32°25'N 117°45'W |

Charts: 18020, 18740 – published in LNM quarterly.

SOUTHERN CALIFORNIA – SAN CLEMENTE ISLAND – UNDERWATER DETONATIONS/GUNNERY OPERATIONS – The U.S. Navy conducts hazardous operations **intermittently on a daily basis, 7 days per week, 24 hours per day** in two areas bound by the following coordinates:

Special Warfare Training Area One

- | | |
|---------------------------|---------------------------|
| a. 33°01'43"N 118°35'43"W | b. 33°01'28"N 118°37'39"W |
| c. 33°02'34"N 118°37'39"W | d. 33°03'23"N 118°36'23"W |

Continued on next page

Special Warfare Training Area Two

- | | |
|---------------------------|---------------------------|
| a. 33°01'43"N 118°35'43"W | b. 33°01'24"N 118°35'24"W |
| c. 33°01'50"N 118°34'18"W | d. 33°02'19"N 118°34'07"W |
| e. 33°03'07"N 118°34'48"W | f. 33°03'23"N 118°36'23"W |

Charts: 18762, 18763 – published in LNM quarterly.

SOUTHERN CALIFORNIA –PACIFIC OCEAN –ANTI-SUBMARINE ROCKET AND TORPEDO OPERATIONS – The U.S. Navy conducts hazardous operations **intermittently on a daily basis** in an area bound by the following coordinates:

- | | |
|---------------------------|---------------------------|
| a. 33°08'00"N 118°55'27"W | b. 33°08'00"N 118°46'00"W |
| c. 33°05'00"N 118°43'00"W | d. 32°58'51"N 118°43'39"W |
| e. 32°55'00"N 118°40'00"W | f. 32°47'00"N 118°50'00"W |
| g. 32°52'45"N 118°55'54"W | h. 32°59'34"N 119°03'03"W |
| i. 33°01'10"N 119°04'30"W | To point of origin. |

Southern California Anti-Submarine Warfare Range
Chart: 18740 – published in LNM quarterly.

SOUTHERN CALIFORNIA –SAN CLEMENTE ISLAND –UNDERWATER DETONATIONS / TORPEDO EXERCISES – The U.S. Navy conducts hazardous operations **intermittently on a daily basis , 7 days per week, 24 hours per day** in an area bound by the following coordinates:

- | | |
|--------------------------------|--------------------------------|
| a. 33°02'30.6"N, 118°34'29.4"W | b. 33°05'10.8"N, 118°29'25.2"W |
| c. 33°01'01.2"N, 118°26'24.6"W | d. 32°58'18.0"N, 118°31'27.0"W |

San Clemente Island Underwater Range.

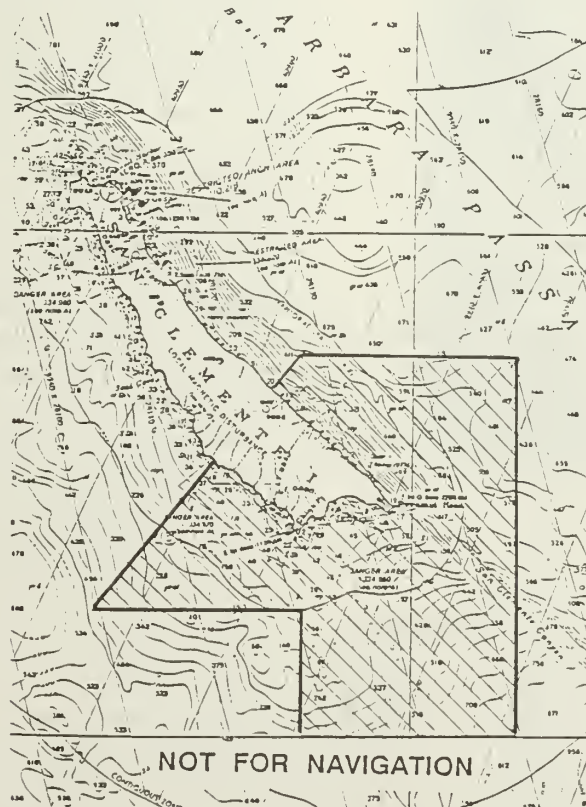
Charts: 18740, 18762, 18763 – published in LNM quarterly.

SOUTHERN CALIFORNIA –SAN CLEMENTE ISLAND –SHORE BOMBARDMENT AREA –The U.S. Navy is conducting hazardous shore bombardment from ship and aircraft near the southern tip of San Clemente Island, **intermittently on a daily basis, Monday thru Sunday**, in an area bound by the following coordinates:

- | | |
|----------------------|----------------------|
| a. 32°55'N, 118°25'W | b. 32°55'N, 118°15'W |
| c. 32°40'N, 118°15'W | d. 32°40'N, 118°25'W |
| e. 32°45'N, 118°25'W | f. 32°45'N, 118°35'W |

Further information on daily schedules can be obtained from Fleet Air Control & Surveillance Facility, Phone: (619) 545-1777 or (619) 545-1778 or by calling "FACSFAC" on channel 16 VHF-FM.

Charts: 18740, 18762, 18764 – published in LNM quarterly.



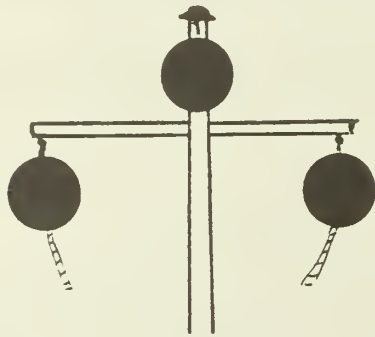
San Clemente Island Shore Bombardment Area

MINECLEARANCE OPERATIONS

United States vessels engaged in mine-clearance operations or exercises are hampered to a considerable extent in their ability to maneuver.

Mineclearance vessels will show the signals listed below when engaged in mineclearance operations. All other vessels must maneuver to keep out of the way of vessels displaying these signals and are not to approach them inside the distance mentioned below. It is especially dangerous to pass between vessel pairs or a group sweeping together.

All vessels towing sweeps are to show: **BY DAY**--A black ball at the fore truck and a ball at the end of each fore yard. **BY NIGHT**--Allaround green lights, one at the fore truck and at the end of each fore yard.



Dayshapes for vessels engaged in Mineclearance Operations

These signals indicate that it is dangerous to approach within 1,000 meters, (approximately 1100 yards) of the mine clearance vessels. Under no circumstances should a vessel pass through a formation of mine-sweepers.

Local mineclearance exercises are commonly conducted in numerous areas in both Southern and Northern California.

NAVAL HELICOPTER MINESWEEPING OPERATIONS

The U.S. Navy conducts mine counter measure training operations both in South San Francisco Bay and in the Gulf of the Farallones. The operation includes large low flying (below 300 feet) naval helicopters towing minesweeping equipment extending 400 to 800 feet behind them with an additional 600 feet of submerged cable and trailing a towed hydrofoil platform. At night, minesweeping helicopters are equipped with a rotating amber beacon which is used

during towing operations to notify/warn other vessels that the helicopter is towing. There are winds up to 100 knots and greater in the vicinity of the helicopters. Mariners are to remain at least 1/2 mile from the helicopters.

SUBMARINE OPERATIONS

Boundary limits and designations of submarine operating areas are shown on the charts in magenta or purple lines. As submarines may be operating in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep well clear of naval target vessels flying a large red flag.

In the past, a number of potentially dangerous incidents have occurred when ships have entered fleet operating areas in which Underwater Demolition Teams or Sea, Air and Land Teams were conducting scheduled operations from a submerged submarine. These operations were being conducted in a specific area assigned for that purpose. These submerged operations ordinarily involve locking swimmers in and out of a submarine while submerged. In this situation, movements of the submarine must be restricted in course, speed, and depth. Furthermore, emergency surfacing could prove hazardous and result in loss of life to swimmers. Therefore, when conducting operations of this type, the submarine and swimmer detachment are relatively immobile and are helpless to evade approaching ships passing through their area.

GEOPHYSICAL SURVEYING VESSELS

In the last few years operations conducted by geophysical survey vessels have increased off the California Coast, due to oil exploration. Survey vessels towing a submerged seismic cable can pose a hazard to navigation. The cable is generally towed at a depth of 15 to 40 feet below the surface, with an overall length up to two miles or more. The end of the cable, if depth and length warrant, is marked by a "tail buoy" displaying either a fixed or flashing white light and often equipped with a radar reflector. Survey vessels towing a submerged cable are required to exhibit lights/dayshapes as prescribed in Rules 24 (Towing and Pushing) and 27 (Restricted Maneuverability) of the Inland and International Navigation Rules as appropriate. Seismic cables can be slacked to allow increased clearance to another vessel crossing over the cable. However, proposal and agreement for such a maneuver should be first made between the two vessels via radiotelephone.

OIL DRILLING STRUCTURES AND VESSELS

Information concerning the establishment, change, or discontinuance of oil drilling structures and vessels, including anchor and mooring buoys, is disseminated via Local and Broadcast Notice to Mariners when the Coast Guard is advised. Exploratory drilling operations are occasionally conducted in and around the Southern California Traffic Separation Scheme that extends from Point Conception into the Gulf of Santa Catalina. The limits of the anchoring system may be marked by buoys.

The anchoring system of a drilling vessel may extend to 5000 feet from the vessel.

- 1) All buoys should be marked with orange and white vertical or horizontal bands.
- 2) All buoys should be equipped with orange reflective material.
- 3) Buoys marking the limit of the drilling vessel anchoring system should be equipped with white lights flashing every four seconds. Mariners are cautioned not to pass between these buoys and the drilling vessel. Occasionally drilling vessels may be located in or near Traffic Lanes of the Traffic Separation Scheme in which case a temporary amendment to the Scheme may be instituted. Notices to Mariners should be consulted.

The following is a list of oil drilling Islands and Platforms located in the Eleventh Coast Guard District. Platform GAIL is equipped with a RACON (LLNR 187) with Morse code characteristic G (--.). Platform Harmony is equipped with a RACON (LLNR 197) with a Positions are approximate. All installations are equipped with a quick-flashing white light at each corner of the island or platform and a fog signal sounding a 2-second blast every 20 seconds. Island RINCON is equipped with a white light (LLNR 3740) flashing every 5 seconds and a fog signal sounding a 2-second blast every 15 Morse code characteristic K (-.-).

*Indicates safety zone permanently established around the facility. The safety zones extend 500 meters from each point on the structure's outer edge except the SALM mooring which extends 1108 meters. No vessel may enter or remain in the safety zone except (1) an attending vessel; (2) a vessel under 100 feet in length overall not engaged in towing; or (3) a vessel authorized by Commander, Eleventh Coast Guard District. During intermittent times oil drilling platforms and mobile drilling units have flare-offs to dispel unnecessary gases from their drilling operations. This may show as a very bright and intense flame. Mariners are cautioned to stay clear of these operations.



NAME OF INSTALLATION	LOCATION	SAFETY ZONE	CHART	REMARKS
Platform ``A"	34°19'55"N 119°36'48"W	None	18725	NAD 83
Platform ``B"	34°19'57"N 119°37'21"W	None	18725	NAD 83
Island BELMONT	33°43'18"N 118°07'29"W	None	18749	
Platform ``C"	34°19'58"N 119°37'54"W	None	18725	NAD 83
Island CHAFFEE	33°44'23"N 118°08'17"W	None	18749	
Platform EDITH*	33°35'45"N 118°08'30"W	147.1108	18746	NAD 83
Platforms ELLEN*	33°34'57"N 118°07'45"W	147.1104	18746	NAD 83
Platforms ELLY*	33°35'00"N 118°07'43"W	147.1104	18746	NAD 83
Platform EMMY	33°39'44"N 118°02'40"W	None	18746	NAD 83
Platform ESTHER*	33°43'10"N 118°06'48"W	165.23	18749	

Continued on next page

NAME OF INSTALLATION	LOCATION	SAFETY ZONE	CHART	REMARKS
Platform EUREKA*	33°33'50"N 118°07'03"W	147.1111	18746	NAD 83
Platform EVA	33°39'42"N 118°03'43"W	None	18746	NAD 83
Island FREEMAN	33°44'28"N 118°09'42"W	None	18749	
Platform GAIL*	34°07'30"N 119°24'04"W	147.1113	18725	NAD 83
Platform GILDA*	34°10'56"N 119°25'10"W	147.1107	18725	NAD 83
Platform GINA*	34°07'02"N 119°16'38"W	147.1103	18725	NAD 83
Platform GRACE*	34°10'47"N 119°28'08"W	147.1102	18725	NAD 83
Island GRISSOM	33°45'34"N 118°10'50"W	None	18749	
Platform HABITAT	34°17'12"N 119°35'20"W	None	18725	NAD 83
Platform HARMONY	34°22'37"N 120°10'03"W	None	18721	
Platform HARVEST*	34°28'09"N 120°40'46"W	147.1110	18721	
Platform HAZEL	34°22'56"N 119°34'04"W	None	18725	NAD 83
Platform HEIDI	34°20'33"N 119°31'10"W	None	18725	NAD 83
Platform HENRY	34°20'00"N 119°33'41"W	None	18725	NAD 83
Platform HERITAGE*	34°21'01"N 120°16'45"W	147.T1192	18721	
Platform HERMOSA*	34°27'19"N 120°38'47"W	147.1109	18721	
Platform HIDALGO*	34°29'42"N 120°42'09"W	147.1112	18721	
Platform HILDA	34°23'18"N 119°35'45"W	None	18725	NAD 83
Platform HILLHOUSE	34°19'53"N 119°36'15"W	None	18725	NAD 83
Platform HOGAN	34°20'15"N 119°32'31"W	None	18725	NAD 83
Platform HOLLY	34°23'24"N 119°54'22"W	None	18725	NAD 83
Platform HONDO*	34°23'27"N 120°07'14"W	147.1105	18721	
Hondo OS+T Facility & SALM*	34°24'19"N 120°06'00"W	147.1106	18721	
Platform HOPE	34°20'27"N 119°31'54"W	None	18725	NAD 83
Platform HOUCHIN	34°20'06"N 119°33'11"W	None	18725	NAD 83
Platform IRENE	34°36'37"N 120°43'46"W	None	18721	
Island RINCON	34°20'50"N 119°26'44"W	None	18725	NAD 83
Island WHITE	33°45'10"N 118°09'31"W	None	18749	

MARINE CONSTRUCTION SITES

Information concerning dredging or construction of breakwaters, piers, pipelines, and marine platforms is disseminated via Local Notice to Mariners and/or Broadcast Notices to Mariners. In addition to the articles which discuss individual projects, a summary of dredging and construction operations is published in the Local Notice each month.

The Vessel Bridge to Bridge Radiotelephone Act and Federal Communications Commission (FCC) Regulations require dredges and floating plants engaged in or near a channel or fairway, in operations likely to restrict or affect navigation of other vessels, to have a radiotelephone capable of operation from its navigational bridge or main control station and capable of transmitting and receiving VHF-FM channel 13 (156.65 MHz).

PIPELINE LAYBARGES AND JETBARGES

With the increased number of pipeline laying operations in the Santa Barbara Channel and other areas, operators of all types of vessels should be aware of the dangers of passing close aboard, close ahead, or close astern of a jetbarge or pipelaying barge.

Pipelaying and jetbarges usually move at 1/2 knot or less and have anchors which extend out approximately 3500–5000 feet in all directions, and may be marked by lighted anchor buoys. The exposed pipeline behind the pipelaying barge and the area in the vicinity of anchors are hazardous to navigation and should be avoided. The pipeline and anchor cables also represent a submerged hazard to navigation and should be avoided. It is suggested, if safe navigation permits, for all types of vessels to pass well ahead of the pipelaying barge or well astern of the jetbarge. The pipelaying barge, jetbarge, and attending vessels may be contacted on VHF-FM Channel 13 for passage instructions.

UNITED STATES SUBMARINE CABLE ACT

The provisions of the United States Submarine Cable Act (47 USC Sections 21–39) make it a federal offense to damage a submarine cable. These penalties do not bar a civil suit by the cable owner for damages to the cable. This act also requires the master of a vessel to keep his gear at least one nautical mile from a vessel engaged in laying or repairing a submarine cable.

Commercial fisherman and other seabed users

may contact AT&T by calling (201) 644-6018 for free charts showing cable areas. Have your vessel name and documentation number ready.

WARNING: Most modern submarine telecommunications cables carry up to 8,000 volts. Any attempts to cut the cable or untangle gear could prove to be lethal.

WARNING: EXPLOSIVE ORDNANCE

The coastal waters of California contain many forms of unexploded ordnance (military weapons), and while some ordnance hazard areas are designated on nautical charts, many unexploded ordnance locations are not known. The types most likely to be encountered are torpedoes, mines depth charges and aerial bombs, although other ordnance items may be found. Non-explosive naval ordnance such as practice torpedoes and practice mines will normally be painted bright orange, but the color could be fouled by corrosion or marine growth. In general, any metallic object having fins, vanes, propellers, horns or possibly plates screwed or bolted to an external surface should be regarded as dangerous. This warning is published for all shipmasters, trawlers, fishermen or mariners conducting ocean bottom operations.

If an object is snagged or netted and the object cannot be immediately identified as a non-explosive device then it **MUST BE TREATED AS AN EXPLOSIVE DEVICE**. Any object which is not painted orange may be dangerous and possibly can explode if brought on board or bumped in any way. If such an object is brought to the surface and cannot be identified, **DO NOT BRING IT ON BOARD OR ALONGSIDE YOUR VESSEL**. If possible, release the object immediately and radio the nearest Coast Guard or Navy unit and give your position and a description of the object. If the object cannot be released, or freed by cutting the net or line, the following actions are advised:

1. Stream the object as far aft as possible.
2. Radio the nearest Coast Guard or Navy unit and stand by for instructions or assistance.
3. Position the crew as forward as possible, keeping the deckhouse between them and the object astern.

4. Maintain steerageway as necessary to stay in the area until assistance or instructions arrive. If a suspicious object is not detected until the trawl or contents of the net have been discharged on board your vessel, the following actions are advised:

1. Avoid any bump or shock to the object.
2. Secure it in place against movement.

3. Keep it covered and wet.

4. Radio the nearest Coast Guard or Navy unit and stand by for instructions or assistance.

5. Position the crew as far from the object as possible.

WARNING: POSSIBLE DANGER FROM UNLABELED DRUMS

With the many exotic chemicals being transported in drums as deck cargo, increasing numbers of reports are received concerning the loss of these potentially dangerous containers. Even empty drums may contain residues which are extremely hazardous to touch or inhalation, or they may contain explosive vapors.

When coming upon derelict drums, whether afloat or from the sea bottom, this danger should be considered. Identifying labels will give adequate warning, but containers are more likely to be found with caution labels washed off. Avoid direct contact and notify the U.S. Coast Guard of any sightings in the U.S. Coastal Waters (**24 hr. TOLL FREE reporting number 1-800-424-8802**), or other responsible authorities if sighting is near any foreign shores.

SEAPLANE OPERATIONS

Mariners are cautioned that unscheduled seaplane operations are conducted throughout Richardson Bay, near Sausalito, in particular that area between the Highway 101 Bridge over Richardson Bay and Strawberry Point. Seaplane operations also are conducted in Long Beach Harbor and at Catalina Island. Mariners are urged to watch for seaplane operations when navigating and to give seaplanes landing or taking off ample room.

CABLE FERRIES IN THE SACRAMENTO RIVER DELTA AREA

Cable ferries are guided by a cable attached to both banks of the waterway which they cross. Because this cable may be at or near the water surface, mariners should exercise special caution in transiting the area of a cable ferry. A survey by the Coast Guard revealed cable ferries operating at the following locations:

- 1) Steamboat Slough between Ryer Island and Grand Island; approximately one mile downstream from the junction with Sutter Slough.
- 2) Cache Slough between mainland and Liberty Island; one-half mile upstream from the junction of Sacramento River Deep Water Ship Channel.
- 3) Empire Cut between Lower Jones Tract and Mildred Island.
- 4) Middle River between Upper Jones Tract and

Island.

6) Little Connection Slough between Empire Tract and Venice Island.

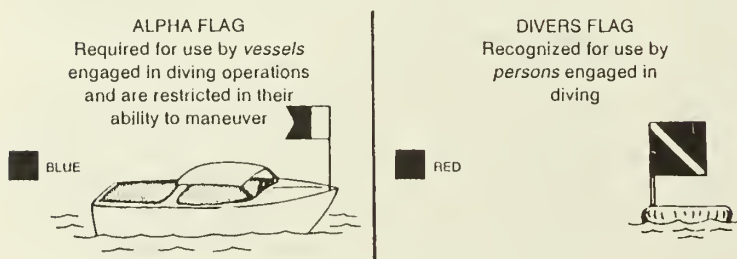
7) Sacramento River at Princeton between Butte and Colusa Counties (about 30 miles downstream of Chico).

ALPHA FLAG FOR DIVING OPERATIONS

A rigid replica of the International Code Flag "A" (ALPHA) at least one meter in height is required for small vessels restricted in their ability to maneuver and engaged in diving operations under Rule 27(e)(ii) of the Inland and International Rules (72 COLREGS). The "A" flag is required for vessels engaged in diving operations, whether underway or at anchor, when unable to keep clear of other vessels as required by the Rules of the Road. At night and during periods of reduced visibility, three all round lights, the top and bottom light red and the middle light white, are required in lieu of the "A" flag. A vessel engaged in diving operations but not restricted in its ability to maneuver is not authorized to show the "A" flag or display the above lights.

DIVER DOWN FLAG FOR CALIFORNIA STATE WATERS

In addition to the rigid replica alpha flag requirements, The State of California authorizes vessel operators to show the traditional divers flag, a red square with a white diagonal stripe to signify divers down, in state waters. The display of this flag is not mandatory, and in no way substitutes for display of the "A" flag or required lighting.



MARINE PROTECTION RESEARCH AND SANCTUARIES ACT OF 1972

Title 1 of the Marine Protection, Research, and Sanctuaries Act of 1972 (Public Law 92-532) makes it unlawful to transport from the United States any material for the purpose of dumping, or the dumping of any material into the oceans, territorial sea, or contiguous zone of the United States, unless the person engaged in such transport or dumping has first obtained a permit from the Environmental Protection Agency. Permits for the transportation and dumping of dredge spoils are issued by the U.S. Army Corps of Engineers.

Information concerning the application for permits issued under this Act may be obtained in Title 40, Code of Federal Regulations, Section 220-227 or from:

U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

NATIONAL MARINE SANCTUARIES

National Marine Sanctuaries have been established to protect and preserve marine birds and mammals, their habitats, and other natural resources in the waters surrounding the Northern Channel Islands, the Farallon Islands and Point Reyes, and to ensure the continued availability of these areas for research and recreation. **Recreational use of these areas is encouraged.** The following activities are generally prohibited in these areas:

- 1) Hydrocarbon operations.
- 2) Discharge of substances.
 - 3) Alteration of, or construction on, the seabed.
 - 4) Commercial vessel operations.
 - 5) Disturbing marine mammals and bird
 - 6) Removing or damaging historical or cultural resources.

Requests for copies of the regulations governing these areas can be obtained by writing to:

Chief Sanctuary Programs Division (N/ORM2)
Office of Ocean and Coastal Resources Management
National Oceanic and Atmospheric Administration
3300 Whitehaven Street, N.W.
Washington D.C. 20235

CHANNEL ISLANDS NATIONAL MARINE SANCTUARY BOUNDARIES

The sanctuary encompasses the waters within 6 miles of Santa Barbara Island and the northern Channel Islands (Anacapa, Santa Cruz, Santa Rosa, and San Miguel Islands), including Castle and Richardson Rocks.

POINT REYES / FARALLON ISLANDS NATIONAL MARINE SANCTUARY BOUNDARIES

The sanctuary consists of 948 square nautical miles of water adjacent to the California Coast, north of San Francisco. The coastal boundary follows the seaward limit of Point Reyes National Seashore and the mean high tide line between Bodega Head (Sonoma County) and Rocky Point (Marin County). The seaward boundary extends six nautical miles offshore and encompasses all the waters encircling the Farallon Islands within twelve nautical miles.

FLOOD WARNINGS

During flood conditions additional precautions are necessary for safe navigation. The basic rule is: If you don't have to use the waterway, don't. Flood flows can cause greatly increased currents, particularly during the ebbs. Channels sometimes shift and obstructions become covered with floodwaters. Trees and other shoreline growth and debris are carried into the streams creating additional hazards. Docks and pilings become submerged and aids to navigation may be submerged, carried off station, or rendered inoperative due to flooding. Small unlighted buoys may become completely submerged. Heavy rains often reduce visibility, further complicating safe navigation. Bridge clearances may be reduced from the charted clearances due to abnormally highwater levels. Mariners should refer to bridge clearance gauges if installed. During these periods, if you have to transit by vessel, use caution.

HARBOR CONDITIONS CHANGE

There are several small craft harbors in Southern California that frequently experience severe wave action and shoaling conditions in the entrance channels. As a result, buoys located in the harbor area often shift because of the changing conditions. Where these conditions exist, notes are shown on the appropriate

NOS charts of the area, published in the Coast Guard Light List, Volume VI and in U.S. Coast Pilot 7, Pacific Coast. **Mariners unfamiliar with these harbors should contact local agencies via VHF-FM radio on the listed frequencies before arrival or departure for up to date information on local conditions.**

As a reminder, the harbors that most frequently experience these conditions are as follows (including the publication in which reference is made to the conditions and the local agency to contact for up to date information):

SEVERE WEATHER LOCATIONS	VHF-FM FREQ.
1) OCEANSIDE HARBOR Chart 18744, Note B U.S. Coast Pilot 7, Page 106 C.G. Light List, Page 27 Oceanside Harbor Patrol	16
2) VENTURA MARINA Chart 18725, Notes E and F U.S. Coast Pilot 7, page 122 C.G Light List, Page 42 Ventura Harbormaster	12, 16 & 73
3) SANTA BARBARA HARBOR Chart 18725, Note B U.S. Coast Pilot 7, Page 123 C.G. Light List, Page 43 Santa Barbara Harbor Police	16
4) SANTA CRUZ HARBOR Chart 18685, Note B U.S. Coast Pilot 7, Page 141 C.G. Light List, Page 47 Santa Cruz Port Director	9, 12 & 16
5) MORRO BAY CHANNEL Chart 18703, Note B U.S. Coast Pilot 7, Page 136 C.G. Light List, Page 44 CG Group Monterey or Harbormaster	16
6) NOYO RIVER Chart 18626 U.S. Coast Pilot 7, Page 199 C.G. Light List, Page 85 CG Group Monterey or Harbormaster	16
7) HUMBOLDT BAY Chart 18622 U.S. Coast Pilot 7, Page 202 C.G. Light List, Page 85 CG Station Humboldt Bay for Bar Report	16

CHAPTER 6

BOATING SAFETY

RECREATIONAL BOATING SAFETY, STANDARDS, AND BOATING CLASSES

Information concerning Federal equipment requirements for recreational boats is contained in the pamphlet "Federal Requirements for Recreational Boats (CG-290)" available at the nearest Coast Guard or Coast Guard Auxiliary Activity. This pamphlet will give you the legal requirements on numbering requirements, boating accident reports, Coast Guard approved equipment, navigation lights, water pollution, safe boating tips, and boating courses.

The Coast Guard Auxiliary offers courses in basic seamanship, sailing, and navigation. These courses are available to anyone and range in length from one to thirteen lessons. There is a small charge for materials in some classes.

For information about Coast Guard Auxiliary and Power Squadron Classes or to receive safe boating literature please write:

Commander (b)
Eleventh Coast Guard District
400 Oceangate, Union Bank Building
Long Beach, CA 90822
or call: (213) 499-5310 or
1- (800) 869-SAIL

For Boating Safety questions, please call the Boating Safety Hotline at:



Coast Guard
Boating Safety Hotline:
800-368-5647

- ✓ *For Boating Safety Recall Information.*
 - ✓ *To Report Possible Safety Defects In Boats.*
 - ✓ *For Answers To Boating Safety Questions.*
 - ✓ **Call, Toll Free!**
-

or write to the following address:
Consumer Affairs Staff (G-BC)
U.S. Coast Guard Headquarters
Washington, D.C. 20593-0001

CHOOSING THE RIGHT BOAT

In the U.S. there are more than 2,500 boat manufacturers that produce more than 4,000 different boat models, powered by a variety of outboard, stern drive, and inboard engines. Because of the great variety, choosing the right boat can be confusing, but making the right choice is one of the most important steps in enjoying our nation's waterways. In selecting the right boat for your needs, consider the type of activity for which you plan to use it, such as water skiing, fishing, cruising, or weekend outings. You need to consider the type of waterway on which it will be used, such as lakes, rivers, or open ocean. Your boat should be large enough to handle the number of people you plan to have on board during a normal outing.

As the operator and/or owner of a vessel you are responsible not only for the prudent and safe operation of your boat, but also for the lives and safety of your passengers and others around you. Become familiar with Federal, State, and local rules and regulations regarding safe boat operation and try to learn all aspects of good seamanship.

COURTESY MARINE EXAMINATION

In addition to providing boating classes, the Coast Guard Auxiliary will conduct a Courtesy Marine Examination (CME) of your boat. The CME is a free check of your boat's equipment to ensure it meets state and federal safety related requirements plus additional standards recommended by the Auxiliary. There is no cost for this service and no report of deficiencies is sent to any law enforcement agency. If your boat meets the CME requirements, the award of the CME decal is your assurance that your boat is properly equipped for fun and safety on the water. If your boat does not meet the CME standards, the examiner will advise you of the deficiencies so you can correct them. A vessel awarded the CME decal will have met the following Coast Guard Auxiliary standards:

- 1) **Numbering:** The boats number must be permanently attached to each side of the forward half of the vessel (bow) and no other number may be displayed there. Numbers are read left to right; be plain, vertical block characters; of color contrasting with the background; distinctly visible and readable; and not less than 3 inches in height. A space or a dash must separate letters from

numbers.

- 2) **Personal Flotation Devices:** PFD's shall be Coast Guard approved, in good condition, and of suitable size for the wearer. Boats less than 16 feet must be equipped with one PFD for each person on board. Boats 16 feet and over must be equipped with one for each person plus one throwable.
- 3) **Fire Extinguishers:** All extinguisher must display either a Coast Guard approval number or a Underwriters Laboratory rating of 5 BC or higher. CME's exceed the federal examinations by requiring that all vessels carry a minimum of one B-1 fire extinguisher.
- 4) **Ventilation:** Closed compartment engines must be properly ventilated.
- 5) **Backfire Flame Arrester:** All Gasoline inboard motors, regardless of date of construction and engine installation, must be equipped with a Coast Guard approved means of backfire flame control.
- 6) **Sound Producing Device:** For compliance of "Navigation Rules" and for distress signaling purposes, all boats must carry some sort of sound signaling device capable of a 4 second blast audible for a half mile.
- 7) **Navigation Lights:** Vessels less than 16 feet in length are not required to have navigation lights. However, if the boat is equipped with them they must be properly displayed.
- 8) **Visual Distress Signal:** All recreational boats operating on coastal waters, Great Lakes, or the high seas, are required to carry Coast Guard approved VDS to be awarded the CME decal. For vessels operating on inland waters, the Auxiliary requires some means of making a suitable day and night VDS.

THE REMAINING CME REQUIREMENTS HAVE NO CORRESPONDING FEDERAL REGULATIONS.

- 9) **Fuel Tank and Lines:** Fuel tank and line must be free of corrosion, properly secured, made of sturdy nonbreakable condition and in good working condition.
- 10) **Anchor and Anchor lines:** All boats must be equipped with an adequate anchor and line of suitable size.
- 11) **Alternate Propulsion:** All boats less than 16 feet in length must carry a means of alternate propulsion. A paddle, oar, or other suitable device meets this requirement.
- 12) **Dewatering Device:** All boats must carry at least one effective manual dewatering device (bucket,

can, scoop, etc.).

- 13) **General Condition:** The vessel must be seaworthy and in overall good condition.



MANUFACTURING STANDARDS

Under the authority of title 46 of the United States Code, the Coast Guard has established certain federal regulations that recreational boaters must meet before selling their product. These regulations consist of both administrative requirements and Coast Guard Safety standards.

The administrative requirements are intended to hold the manufacturers responsible for their product. They cover defect notification; hull identification; first purchaser lists; and certification compliance.

The safety standards are intended to eliminate unsafe construction practices and performance characteristics. These standards cover such areas as display of capacity information; safe loading; safe powering; basic floating; and start-in-gear protection for outboard motors. Commercial boats are not required to meet these safety standards. While a commercial boat operator may be able to substitute his experience for the increased safety provided by these standards, the recreational boater is often inexperienced and takes on an additional unnecessary risks in operating a vessel designed for commercial use. Accordingly, in order for a work boat to be exempt from these safety standards, the manufacturer must be able to verify to the Coast Guard that the boats are and sold truly for commercial use only. Anyone who knowingly sells a commercial boat to a person for their use as a pleasure boat violates federal regulations and is subject to civil penalties of up to \$2,000 for each violation.

For more information on boating manufacturing

standards, write to your local U.S. Coast Guard Marine Safety Office. In the 11th Coast Guard District they may be contacted at:

**Commanding Officer
Marine Safety Office
Los Angeles/Long Beach
165 N Pico Ave.
Long Beach, Ca 90822-1096
Attn: Inspections Dept.
(213) 499-5540**

**Commanding Officer
Marine Safety Office San Diego
2710 North Harbor Drive
San Diego, Ca 92101-1064
Attn: Inspections Dept.
(619) 557-5860**

**Commanding Officer
Marine Safety Office San Francisco Bay
Coast Guard Island, Bldg. 14
Alameda, Ca 94501-5100
Attn: Inspections Dept.
(415) 437-3121**

BOATING ACCIDENT REPORTING

Boating accidents that involve a recreational boat or its equipment **must be reported within 24 hours to the nearest Coast Guard unit or state authority** if a person dies, disappears from a vessel under circumstances that indicate death or injury, or is injured and receives medical attention in addition to normal first aid. The operator must report the accident to the nearest State boating authority within 48 hours and provide the following information:

- 1) The date, time, and the exact location of the accident.
- 2) The name of each person who died, disappeared, or was injured.
- 3) The number and name of the vessel.
- 4) The names and address of the owner and operator.

If the operator cannot give this notice, each person on board shall notify that authority, or ensure notice has been given.

Accidents involving only property or equipment damage must be reported within 10 days if the damage is in excess of \$200, or total boat loss.

SAFE BOATING IS NO ACCIDENT!

FLOAT PLANS

The Coast Guard encourages you to leave your float plan with friends or relatives who can report your safe arrival. It is equally important for you to advise

them of any change to these plans. Should your friends or relatives fail to receive information on your arrival, or within a reasonable amount of time thereafter, they should notify the nearest Coast Guard activity with the information provided on the Float Plan.

Complete this page, before going boating and leave it with a reliable person who can be depended upon to notify the Coast Guard, or other rescue organization, should you not return as scheduled. Do not file this plan with the Coast Guard.

1. NAME OF PERSON REPORTING AND TELEPHONE NUMBER _____

2. DESCRIPTION OF BOAT. TYPE _____ COLOR _____

TRIM _____ REGISTRATION NO. _____

LENGTH _____ NAME _____ MAKE _____

OTHER INFO. _____

3. PERSONS ABOARD _____

NAME	AGE	ADDRESS & TELE. NO.
_____	_____	_____
_____	_____	_____
_____	_____	_____

4. ENGINE TYPE _____ H.P. _____

NO. OF ENGINES _____ FUEL CAPACITY _____

5. SURVIVAL EQUIPMENT: (CHECK AS APPROPRIATE)

PFDs _____ FLARES _____ MIRROR _____

SMOKE SIGNALS _____ FLASHLIGHT _____ FOOD _____

PADDLES _____ WATER _____ OTHERS _____

ANCHOR _____ RAFT OR DINGHY _____ EPIRB _____

6. RADIO YES/NO TYPE _____ FREOS. _____

7. TRIP EXPECTATIONS: LEAVE AT _____ (TIME)

FROM _____ GOING TO _____

EXPECT TO RETURN BY _____ (TIME) AND IN

NO EVENT LATER THAN _____

8. ANY OTHER PERTINENT INFO. _____

9. AUTOMOBILE LICENSE _____ TYPE _____

TRAILER LICENSE _____ COLOR AND MAKE OF

AUTO _____

WHERE PARKED _____

10. IF NOT RETURNED BY _____ (TIME) CALL THE

COAST GUARD, OR _____ (LOCAL AUTHORITY)

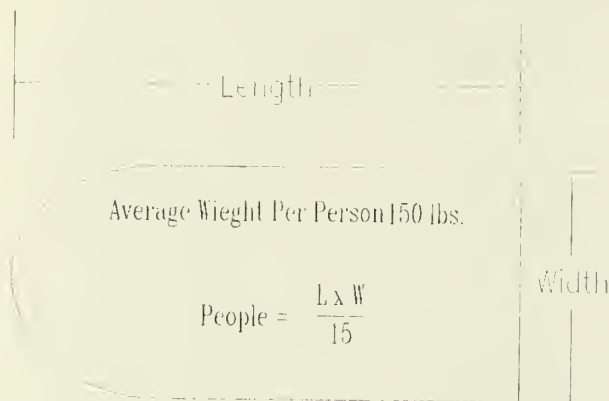
TELEPHONE NUMBERS _____

An immediate report should be made to the Coast Guard of any vessel reported overdue which is subsequently located so search efforts may be terminated.

LOADING YOUR BOAT

There are several things that should be noted when loading your boat: distribute the load evenly; do not stand up in a small boat; do not overload; consult the "U.S. Coast Guard Capacity information plate".

On boats with no capacity plate, use the following formula to determine the number of persons that you can safely carry in good weather.



Passenger Capacity Calculation

NOTICE TO SPONSORS OF MARINE EVENTS

If you plan to sponsor a marine event, Part 100 of Title 33, U.S. Code of Federal Regulations requires that you submit an application to the Coast Guard in cases where the nature, circumstance, or location of the event will introduce extra or unusual hazards to the safety of life on the navigable waters of the United States. Examples of events which require Coast Guard approval include, but are not limited to: yacht races, boat parades, waterskiing competitions, and swims.

If you sponsor an event which does not present such a hazard as described above, no Federal approval is required. However, you should check with your local or state governments for other requirements.

Although your event may not require approval, we are still interested in knowing when and where it will be held in order to safely schedule other events in your particular area and allow publication in the Local Notice to Mariners. "Applications for Approval of Marine Event (CG Form 4123)" are available through the local Coast Guard Group Commanders. They may be contacted at:

Commander
U.S. Coast Guard Group San Diego
2710 N Harbor Dr.
San Diego, Ca 92101-1079
(619) 557-5816

Commander
U.S. Coast Guard Group
Los Angeles/Long Beach
165 N Pico Ave.
Long Beach, Ca 90822-1096
(213) 499-5550

Commander
U.S. Coast Guard Group Monterey
100 Lighthouse Ave
Monterey, Ca 93940-1497
(408) 647-7300

Commander
U.S. Coast Guard Group San Francisco
San Francisco, Ca 93940-1497
(415) 399-3300

Commander
U.S. Coast Guard Group Humboldt Bay
McKinleyville, Ca 95521-9309
(707) 839-6115

Please follow the instructions on the form carefully. Your application must be received by the Coast Guard at least 90 days prior to the event. It may be necessary to summarily disapprove late applications unless circumstances justify late submission. Applications will be processed as quickly as possible. If any questions arise, we will try to contact you, so make sure you provide a telephone number where you can be contacted between 7:30 AM - 4:00 PM (Mon-Fri).

Large scale events and those where special local regulations are needed to regulate specific areas require earlier submission of application to allow required publication in the Federal Register. When necessary, Coast Guard or Coast Guard Auxiliary Vessels may be assigned in addition to those provided by the sponsor to safeguard maritime safety.

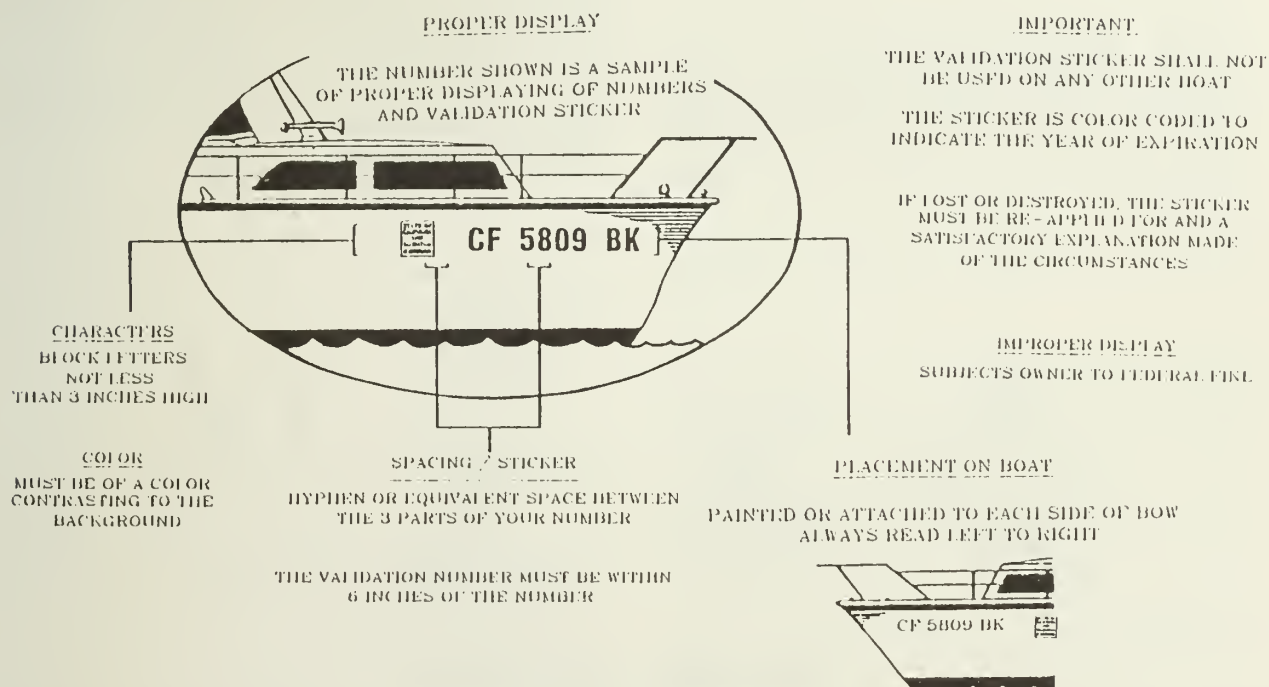
You should understand that the sponsor is solely responsible for the safe conduct of the event. This includes instructions to, qualification of, and positive control over participants, as well as protective measures for spectator fleet and the general boating public. Measures to preclude interference with the normal flow of commercial and recreational traffic are also required. When necessary, special local regulations will also be issued by the Coast Guard to safeguard your event.

VESSEL NUMBERING REQUIREMENTS

All undocumented vessels equipped with propulsion machinery must be registered in the state of principal use. When you register your boat, you will be issued a certificate of number. These numbers must also be displayed on your vessel.

A valid **CERTIFICATE OF NUMBER** showing the numbers issued to a vessel must be on board whenever the vessel is in use. When a vessel is moved to a new state of principal use, the Certificate of Number is valid for at least a period of 60 days before a new one is required.

In California, application to register your vessel may be made at any Department of Motor Vehicles (DMV) office. Upon receipt of fees, the DMV will issue your Certificate of Number, Certificate of Ownership, and two color coded registration stickers. The display of numbers must be painted or permanently attached to each side of the forward half of the vessel and no other number may be displayed thereon. The registration stickers must be displayed within 6 inches of the number (as shown below).



PERSONAL FLOTATION DEVICES

- 1) Boats sixteen (16) feet or over in length: One Type I, II, III, or V (wearable) for each person on board and one Type IV (throwable) in each boat. Type V "hybrid" PFDs must be worn to meet Federal PFD Regulations.
- 2) Boats less than sixteen (16) feet in length and all canoes and kayaks: One Type I, II, III, IV, or V for each person of board.

TYPE I - (OFF-SHORE)

Type I PFD is an approved device designed to turn an unconscious person in the water from a face downward position to a vertical or slightly backward position, and to have more than 20 pounds of buoyancy. Recommended for off-shore cruising. Acceptable for

all size boats.

TYPE II - (NEAR-SHORE)

A Type II PFD is an approved device designed to turn an unconscious person in the water from a face down position to a vertical or slightly backward position and to have at least 15.5 pounds of buoyancy. Recommended for closer, inshore cruising. Acceptable for all size boats.

TYPE III - (FLOTATION AID)

A Type III PFD is an approved device designed to keep a conscious person in a vertical or slightly backward position and to have at least 15.5 pounds of buoyancy. While having the same buoyancy as Type II, the Type III has a lesser turning ability to allow for a

comfortable design for water activities such as water skiing.

Recommend for in-water sports, or on lakes, impoundments, and close inshore operation. Acceptable for all size boats.

TYPE IV - (THROWABLE DEVICE)

A Type IV PFD is an approved device designed to be thrown to a person in the water and not worn. It is designed to have at least 16.5 pounds of buoyancy. Acceptable for boats less than 16 feet and canoes and kayaks and as a throwable device for boats 16 feet and over in length.

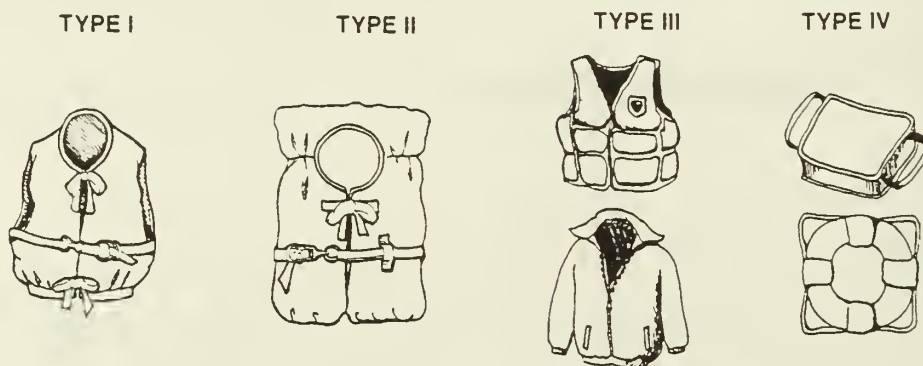
TYPE V - (SPECIAL USE DEVICE)

Type V PFDs are designed and approved for restricted activities such as sailboarding or commercial whitewater rafting. These PFDs are only acceptable when used in the sport for which they were designed.

The label on a Type V will tell you what activity or use it is approved for, what restrictions or limitations apply and its performance type. Be aware that a Type V approved only for "commercial use" may not be used for recreational purposes. Some Type V PFDs (hybrids) are approved as a replacement to a Type III device, such as "exposure coveralls", but they can be accepted as a Type III device only when worn.

HOW IS APPROVAL SHOWN?

Coast Guard approval is shown by a stencil marking or tag on the PFD. This tag or marking shows the name and address of the manufacturer and the Coast Guard approval number. It also shows the amount of flotation in the device and the PFD Type (I, II, III, IV, V). If the PFD is badly torn, damaged, rotted, punctured, or otherwise unserviceable, it no longer meets legal requirements.



SAVE A LIFE - WEAR YOUR PFD!

FEDERAL MARINE SANITATION DEVICE REGULATIONS

The Environmental Protection Agency (EPA) issued Federal regulations for performance of marine sanitation devices (MSD's) in 1976. The Coast Guard issued regulations which implemented these standards on 12 April 1976. The regulations apply to all vessels on which toilet facilities have been installed, but do not require the installation of toilet facilities on a vessel which does not already have an installed toilet. The term MSD includes any equipment for installation onboard a vessel which is designed to receive, retain, treat, or discharge sewage, and any process which treats such sewage. It does not include "portable devices" which can be carried on and off the vessel.

A state may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into

some or all of the waters within such state by making a written application to the Administrator, Environmental Protection Agency. Upon receipt of the Administrator's approval that adequate facilities for the sanitary removal and treatment of sewage is available for these waters, the prohibition would apply. In such waters, flow-through devices must be secured to prevent any discharge to the receiving waters.

ALL MARINE SANITATION DEVICES MUST BE COAST GUARD CERTIFIED

If the unit was built before 30 January 1976, it is considered an "existing device". This equipment was certified by official letter from the Coast Guard. No-discharge devices built before 30 January 1975 were certified by regulation without a letter, however some manufacturers applied for and received letters

certifying their devices. If your vessel has a no-discharge device on board, you should obtain a copy of this letter from the manufacturer or distributor as your record that the equipment is Coast Guard certified. If the unit was manufactured on or after 30 January 1976 and is Coast Guard certified, it will have a certification label on it. A no-discharge device being used solely for the storage of sewage and flush-water at ambient pressure and temperature may be certified. Manufacturers may apply for certification on such devices and thereby may label them as Coast Guard Certified. That label gives the certification number and indicates whether the equipment has been type approved for inspected or uninspected vessels.

There are two varieties of marine sanitation equipment. One variety treats the waste and then discharges it into the water (Type I or Type II). The second retains the waste onboard or treats it in a manner which does not result in any discharge into the water (Type III). This includes holding tanks, recirculators and incinerators. You should investigate the area in which you will be operating to determine whether it is a no-discharge or discharge area. Then you can decide on discharge or no-discharge equipment.

There are two types of no-discharge areas: Federal, and state or local. Federal regulations prohibiting discharges apply either to a class of waters or to specific waters. State and local prohibition areas are controlled by the state boating authority or local police. If you are operating in a no-discharge area, check on the availability of pumpout facilities. You can then decide on either retention equipment which will require periodic pumpout, or incinerating equipment which does not. No-discharge areas in the 11th Coast Guard District include: San Diego Bay at depths less than 30 feet (MLW), Mission Bay, Avalon Bay, Oceanside Harbor, Dana Point Harbor, Upper and Lower Newport Bay, Huntington Harbor including Sunset Bay, Channel Islands Harbor, Lake Tahoe, and Richardson Bay. If you operate in both discharge and no-discharge zones, you may want to combine a Type I or Type II unit with Type III equipment to give the necessary flexibility.

The Coast Guard does not have specific capacity standards for all vessels. When you are selecting equipment, be sure to choose a system with adequate capacity for your needs. Look at the maximum number

of persons that will be aboard your vessel, including guests, and select accordingly. When choosing retention or recirculating devices, be sure to provide sufficient capacity between pumpouts for your cruising needs. Remember that it is illegal to pump the contents of a holding tank overboard in U.S. waters.

When choosing marine sanitation equipment, remember the considerations involved in selecting any piece of equipment for your vessel. Do I have adequate space for it? Is the vessel's electrical system capable of carrying the load? If needed, is fresh water supply of sufficient capacity?

Remember, a little planning before you invest in a Marine Sanitation Device can result in years of trouble-free safe operation of the vessel's marine sanitation system, and you can take pride in your contribution to protecting the quality of the nation's waters for future generations.

These requirements are checked by Federal, state, and local authorities who are assisting the Coast Guard. All reports of violations are forwarded to the Coast Guard and are vigorously enforced.

VOLUNTARY STANDARDS FOR UN-INSPECTED COMMERCIAL FISHING VESSELS

Commercial fishermen engage in one of the most hazardous of all occupations. An average of 250 fishing vessels and 84 lives are lost each year. Most of these casualties could be prevented if well established design and safety practices were followed.

In 1985, the Coast Guard developed a voluntary safety program designed to reduce the number of casualties by not less than 10 percent by 1991. In pursuit of this goal, the Coast Guard developed voluntary fishing vessel design standards and published them in Navigation and Vessel Inspection Circular (NVIC) 5-86. A vessel safety manual was also developed in cooperation with the North Pacific Fishing Vessel Owners' Association. These publications provide information on stability, hull design and maintenance, watertight integrity, watchkeeping, fire prevention and control, medical emergencies, navigation, and lifesaving equipment. While the NVIC is designed for technical use in fishing vessel design and construction, the safety manual is specifically tailored for use by fishermen. Copies of these publications can be obtained as described below.

To order the vessel safety manual, send a check or money order for \$45 to:

North Pacific Fishing Vessel Owners'
Association
Vessel Safety Program
Bldg C-3, Room 218
Fisherman's Terminal
Seattle, Wa 98119
(206) 285-3383

To order NVIC 5-86, send a check or money order for \$11 made payable to the "Treasury of the United States" to:

Commanding Officer
Marine Safety Center
400 7th St. S.W.
Washington, D.C. 20590-0001
(202) 366-6483

In addition to development of a voluntary safety program, the Coast Guard has worked closely with various Federal, state, and local government agencies as well as fishing vessel associations to promote fishing vessel safety. As operational commitments permit, the Coast Guard often provides participants for safety presentations relating to its missions (e.g. requests for helicopter hoist equipment, guest speakers, and participation in trade shows).

For more information about the voluntary safety program, contact the Fishing Vessel Safety Coordinator at the nearest Coast Guard Marine Safety Office.

THE THREE R's OF BAREBOAT CHARTERING: RIGHTS, RESPONSIBILITIES, AND RISKS

Do you bareboat charter vessels for use by yourself or your company? Did you know that the penalties for any deficiencies found on the vessel or for improper operation of the vessel were your responsibility? Do you bareboat your vessel to others to defray the cost of ownership? Did you know you risk losing your vessel by forfeiture to the government for illegal actions of your charterer?

This article is intended to highlight some of the possible implications and consequences of bareboat charters of recreational vessels. Recreational vessel owners who attempt to bareboat charter their vessels may be surprised to learn that they have taken on greater risks than anticipated. We will look at the background of this type of charter and how it evolved and clarify the relationships of the involved parties.

This article focuses on the charter of vessels less than 100 gross tons, but many of these same principles pertain to the charter of larger vessels as well.

First some definition of terms which will be helpful. A small passenger vessel is a vessel of less than 100 gross tons carrying more than six passengers and is required to be inspected by the U.S. Coast Guard. An uninspected passenger vessel is a vessel less than 100 gross tons carrying six or fewer passengers and is not required to be inspected. However, it is required to be under the command of an operator licensed by the U.S. Coast Guard and to comply with the rules in Title 46, Code of Federal Regulations, Subchapter C for uninspected commercial vessels. For most purposes, any individual carried on either type, other than the owner and crew is considered a passenger, however the law does make an exception for a guest on board a vessel being "operated only for pleasure who has not contributed consideration for carriage on board." Note that there are two parts to this exception: "operated only for pleasure" and "has not contributed consideration." Vessels who meet both these criteria are considered recreational vessels. Consideration need not be in the form of money. Consideration includes anticipated future financial gain, such as that anticipated when entertaining business clients or prospective clients.

When an owner attempts to bareboat charter his or her vessel, he or she must consider the following issues:

- (1) If there is not a valid bareboat charter, does the vessel meet pertinent inspection and manning requirements, and is the vessel properly documented or numbered; and
- (2) If there is a valid bareboat charter, is the vessel nevertheless still carrying "passengers" ie., is the charterer carrying passengers). This again raises the inspection, manning, and documentation concerns. As will be discussed below, having a valid bareboat charter does not necessarily absolve owner of risks and responsibilities.

The bareboat charter has evolved as a highly contractual agreement between a vessel owner and a charterer who is willing to accept the benefits and consequences of ownership for a period of time. Historically, it was a device used with respect to large commercial vessels for multi-year periods. As the charterer accepts the benefits and liabilities of ownership, the owner must relinquish command, control, and possession of the vessel. It is NOT sufficient to establish this transfer solely on the terms of the contract.

The courts have long held that the establishment of

a bareboat charter must be contingent on more than the weight of the paper to support it. The actual conduct of the involved parties must be consistent with the written agreement. The vestige of ownership must have in fact passed from the owner to the charterer for the term of the charter. The burden of establishing the existence of the bareboat charter rests with the owner and this is indeed a heavy burden. When the dealings and relationships between the involved parties are indicative of anything less than complete transfer of command, control, and possession, the courts are reluctant to find that the vessel was legally bareboat chartered.

The owner, charterer and master/skipper all should be aware of their responsibilities and the risks involved in a bareboat charter.

OWNER: Under the terms of a valid bareboat charter, the owner (be it an individual, partnership, corporation, etc.) of the vessel retains exclusive title to the vessel for the duration of the bareboat charter. Of course, as with any lease or rental type agreement, the owner will receive some compensation for the use of the property.

The owner is charged with furnishing a generally seaworthy vessel, free of defects, to the charterer. To insure this and that the vessel is returned in original condition (normal wear and tear excepted), it is generally stipulated that a survey by the owner and charterer is completed prior to commencement of the Charter. This "on charter" survey establishes condition of the vessel at the time the vessel is "handed over" to the charterer. It is also generally accepted that an "off charter" survey is conducted at the termination of the charter period to insure the vessel is returned in original condition exclusive of normal wear and tear.

Even with a valid bareboat charter of the vessel, the owner faces certain risks. If the charterer improperly uses the vessel, such as outside the documented use of the vessel (for example, a pleasure yacht being used for commercial purposes), the vessel may be subject to seizure and forfeiture. Other violations may also call for seizure and forfeiture, for example, smuggling. The owner may remain responsible for violations irrespective of the charter status. An example may prove helpful:

A documented yacht (recreational vessel) is bareboat chartered to a group of individuals. The documentation of a vessel serves to establish its nationality and provides evidence of its qualification to engage in a given trade. There are five categories of U.S. federal documentation: registry (allows vessel to

engage in foreign trade), coastwise (restricts trade between any two points within the coastwise laws of the U.S. vessels built, manned, owned and controlled by U.S. citizens) Great Lakes, fishery, and recreational. Day sails – with limited exceptions – from a U.S. port are coastwise trade. The group hires a non-U.S. citizen as master or captain and they take along a few paying passengers on a coastwise voyage to help defray expenses. All of this may be without the knowledge of the owner. If the vessel is a yacht documented only for recreation it may not carry passengers. The vessel may be seized and forfeited for violation of the document and engaging in a protected (coastwise) trade. The owner may be held liable for civil penalties for allowing the vessel to be under the control of a non-U.S. citizen and for carrying passengers without the necessary safety certificates and licensed personnel.

If it is subsequently determined that no bareboat charter of the vessel existed, additional responsibilities fall on the owner. If the vessel is damaged or lost, the possibility exists that the insurance coverage may be voided (depending on the terms of the insurance policy). If persons are injured, the owner may be sought as the responsible party, which becomes particularly important if merchant seamen are the injured parties. There will still be the civil penalties noted above with which to contend. In general, if it is found that a bareboat charter did not exist, the owner will be considered to have carried passengers on board the vessel. Any payment for the cruise/voyage would be sufficient to establish consideration for carriage on board.

CHARTERER: Under a valid bareboat charter, the charterer stands in the shoes of the owner of the vessel. The charterer has complete command, control, and possession of the vessel as if it were his or her own. There is usually a clause dealing with return of the vessel in the same condition as it was in at the start of the charter ("off charter" survey). Also the "owner" for the term of the charter, the charterer must assume responsibility for the vessel operations within the maritime laws and regulations. Herein lies the risk to the charterer under this form of agreement.

The charterer, under a valid bareboat charter agreement, assumes ownership for the purpose of several of the liabilities attendant to the vessel operations. Under the laws dealing with merchant seamen protection, the owner (in this case the bareboat charterer) owes employees a safe place to work and proper equipment with which to work. The charterer

becomes the warrantor of seaworthiness for his or her employees and passengers or guests. Proceedings resulting from negligent operation of the vessel may be directed toward the charterer. Violations resulting from the carriage of passengers on a vessel which does not meet the regulations for passenger service, may be directed to the charterer as well as the owner.

Coast Guard investigations have revealed numerous instances where vessels that were purported to be under a bareboat charter were actually engaged in the carriage of passengers. More often than not, purported charterers did not understand the bareboat charter agreement of the potential liabilities and risks they were assuming. The Coast Guard has found vessels operating with large numbers of persons with inadequate lifesaving, fire protection, navigation, and other safety equipment. There have been cases of total vessel losses due to structural inadequacy of the vessel and/or operator error while under a purported bareboat charter. The maritime safety laws and regulations have evolved over a considerable period of time and they are generally written and amended as a result of casualties and loss of life. The use of bareboat charters to circumvent these important safety laws is of great concern, especially where unsuspecting charterers do not understand the consequences of the charter.

MASTER/CAPTAIN/SKIPPER (HIRED):

As previously noted, the master's responsibility is to the charterer under a valid bareboat charter, as the charterer, not the owner, is the employer. Although the charterer is responsible for finding and hiring a master, the owner has an interest in the competency of the master. To this end, an owner may provide the charterer with a list of masters from which to choose, however, the charterer cannot be restricted to this list. This can make for a very difficult position for the hired skipper, in that he or she may be in a position of having to please both parties. Failure to satisfy the demands of the owner may result in removal from future approval or selection, while failure to accommodate the charterer can result in immediate dismissal. That difficulty notwithstanding, it is clear that the master's allegiance must be to the charterer. It is for this reason that the Coast Guard will not accept as a valid bareboat charter, those charters where the owner acts as the vessel master. An owner cannot relinquish command of the vessel while acting as the master.

There are some risks associated with acting as the hired captain in addition to the traditional hazards. The Coast Guard has acted under Suspension and

Revocation Proceedings against licensed masters. In cases where the claim of a bareboat charter was defeated, masters have had their licenses suspended for operating a passenger carrying vessel without the required equipment or inspection certificate. The law also provides for civil penalties against the owner, charterer, managing operator, agent, master, or individual in charge of those vessels which are operated without the required safety equipment or inspection certificate.

SUMMARY: The Coast Guard has recently witnessed an increase in owners of previously bareboat chartered vessels, applying for Coast Guard inspection and certification. This may possibly be attributed to an increased awareness of potential liabilities by vessel owners or after consideration and discussion with Coast Guard inspection personnel, the perceived cost of operating inspected vessels was less than originally anticipated. Certainly that cost is less than the potentially catastrophic costs of litigation and liability resulting from a casualty where it is subsequently determined that no bareboat charter existed. Also, the cruise business is showing dramatic increases. There are more passenger dollars available and still more predicted for the future. Increased Coast Guard investigation and enforcement in this area may also be persuading owners of borderline or questionable charter operations to submit their vessels for certification. Vessel owners and operators who have successfully completed the certification process are very vocal and do not hesitate to report questionable operations. After all, they are in competition for the same clientele.

While the bareboat charter of recreational type vessels will continue, both parties to the purported charter must fully understand the three R's of bareboat chartering: Rights, Responsibilities and Risks. More often than not, charterers really do not understand the liabilities undertaken and the safety considerations for which they are responsible. Owners do not always fully appreciate the exposure they have to penalties and forfeiture for both legitimate and illegitimate charters. And most important, the Coast Guard is concerned that the fundamental intent of the vessel inspection and manning laws (ie. the safety of passengers) could be compromised when unsuspecting individuals enter into alleged bareboat charter arrangements.

When considering a bareboat charter, remember

- 1) The owner must relinquish command, control and possession of the vessel to the charterer.
- 2) The charterer is responsible for the operation and safety of the vessel, its crew, and all other persons

aboard during the term of the charter.

- 3) The charterer is responsible for ensuring that the vessel complies with all regulations which are applicable to the service of the vessel.
- 4) The vessel owner may still be at risk to penalty action stemming from the charterers misuse of the vessel.
- 5) A bareboat chartered vessel is still at risk of forfeiture if in violation of certain U.S. laws.
- 6) The master may also be held accountable for the safe operation of the vessel as well as the ensuing compliance with all applicable safety equipment requirements and applicable inspection certificates.

HIGH-INTENSITY DECK LIGHTS ON FISHING VESSELS

The Coast Guard is concerned over high-intensity deck or working lights displayed on fishing vessels overnight after setting and receiving their fishing gear.

The high intensity lights often obscure the navigation lights and can interfere with the proper lookout, both on the fishing vessels and on vessels passing close aboard.

High-intensity deck or working lights can destroy a lookout's night vision.

Vessels displaying lights in this manner are in direct violation of Navigational Rules.

Navigation Rule 20(b) prohibits the display of lights that impair the visibility of the distinctive character of a vessel's navigation lights which interfere with the keeping of a proper lookout.

While the loom of these lights makes the fishing vessels presence known to other vessels in the area, that

vessel's navigation lights are obscured, contributing to an unsafe situation.

Navigation lights provide necessary information which is critical to vessel crossing, or overtaking, in order to establish which is the stand-on and which is the give-way vessel.

If high-intensity lights are used, they must be shielded or aimed so that the navigation lights are visible and the lookouts on both fishing vessels and the passing vessels can perform their duties properly.

PACIFIC OCEAN WHALE WATCHING

Encounters between whales and boaters has become a common occurrence along the California Coast during the gray whale migration from **January thru April** of each year. The National Marine Fisheries Service has established whale watching guidelines for boat operators to protect gray whales from potential harassment. When in sight of whales:

Do not cross the whales path.

Do not restrict the normal movement or behavior of the whale.

Maintain at least 100 yards from the whale.

Avoid excessive speed or sudden changes in course or speed.

The Federal Whale Watching Guidelines along with information on gray whale conservation, suggestions for boat handling near gray whales, and a description of common whale behavior is available from:

**The Oceanic Society Expeditions
Fort Mason Center, Bldg E
San Francisco, CA 94123
Phone: (415) 441-1105.**



CHAPTER 7

LAW ENFORCEMENT

LAW ENFORCEMENT

U.S. Coast Guard vessels are identified by a distinctive stripe, the words "COAST GUARD" on the side of the vessel, the Coast Guard Ensign, and are manned by uniformed personnel. Coast Guard law enforcement personnel may also be found aboard other vessels displaying the Coast Guard Ensign. (U.S. Navy Vessels, Coast Guard Auxiliary vessels, state and local law enforcement vessels, etc.)



Coast Guard 210' Medium Endurance Cutter
and 82' Patrol Boat (background)

The Coast Guard has authority to make inquiries, examinations, inspections, searches, seizures, and arrests upon the high seas and waters over which the United States has jurisdiction, in order to enforce Federal Laws. To compel compliance with boardings, inquiries, examinations, inspections and searches of vessels, the Coast Guard may use all necessary force. A vessel underway, upon being hailed by a Coast Guard vessel or patrol boat, is required to stop immediately and lay to, or maneuver in such a way as to permit the boarding officer to come aboard. Failure to stop to permit boarding may subject the operator or owner to a maximum penalty of \$5000. Forcibly resisting a Coast Guard boarding officer is a felony punishable up to 10 years in prison and a \$250,000 fine.

A civil penalties may be imposed by the Coast

Guard for failure to comply with equipment requirements, numbering requirements, observing the Rules of the Road, or to report a boating accident.

COAST GUARD BOARDING POLICY

An important Coast Guard mission is maritime law enforcement on the high seas and on waters subject to the jurisdiction of the United States. The Coast Guard enforces all Federal laws, including those dealing with: the 200 mile exclusive economic zone, drug smuggling, illegal immigration, safety, and water pollution.

To enforce these laws on the water, the Coast Guard is empowered to board and inspect vessels. Many of the laws can only be successfully enforced by boarding a vessel while it is underway. Nationwide about 70,000 boardings are conducted annually with nearly half finding noncompliance with Laws and regulations.

Random boardings are a key to successful law enforcement in our Government's efforts to stem the flow of illegal drugs into the country. Often as a result of routine boardings, the Coast Guard discovers illegal drugs, and drug traffickers at sea are caught by surprise.

Boardings are not necessarily based on suspicion that a violation already exists aboard the vessel. The purpose for conducting law enforcement boardings is to enforce all applicable U.S. Laws and to educate mariners on the proper and safe practices associated with operating vessels. This authority has been consistently upheld by the courts. All Coast Guard officers and petty officers are Federal law enforcement officers, and with few exceptions, they may board any United States vessel, anytime, anywhere.

The Coast Guard boarding team is armed. Although most mariners that are boarded are engaged in legitimate recreational or commercial pursuits, even a seemingly innocent pleasure boat boarding sometimes turns into a dangerous confrontation.

Drugs and criminals have been found in almost every type of vessel – from very sleek yachts to small freighters, and in fishing vessels of almost every description. The Coast Guard, as a Federal Law Enforcement Agency, trains its personnel to understand the risks of their mission and to protect themselves.

The Coast Guard follows a standard procedure before boarding. The boarding team contacts the vessel and provides an explanation of what is about to happen. Coast Guard personnel will always properly identify

themselves, will always be in uniform, coveralls, or survival suits displaying the Coast Guard insignia.

Once aboard the vessel, examination is usually limited to determining the vessel's status and checking for compliance with Federal civil law. If during inspection, a reasonable suspicion develops that the vessel has been engaged in criminal activity, the boarding officer may investigate further. If the vessel is subject to a customs inspection, the boarding officer may conduct a thorough search of the entire vessel.



Coast Guard Boarding Team

Coast Guard boarding officers are trained to be courteous to the public. If there is full cooperation, the boarding will be over quickly, and with minimum disruption. Failure to cooperate or hostility can lead to suspicion of illegal activity, and the check can become detailed and time consuming for everyone.

Coast Guard vessels may have their running lights out at night while on patrol. Running lights, if off, will be turned on prior to boarding, and a light will usually be directed at the Coast Guard ensign flying from the mast so that the Coast Guard vessel is easily recognized. If possible, the red racing stripe on the bow will also be illuminated. Even if the boarding is being done by a boat from a U.S. Navy vessel, that boat or the U.S. Navy vessel will fly the Coast Guard ensign.

Many law abiding citizens are uncomfortable in the presence of an armed boarding party, but the Coast Guard is depending on the public to be patient and cooperative during boardings, and to bear in mind that

the Coast Guard is like any other armed police force. The Coast Guard also asks the public to report any suspicious activity of other boats.

The Coast Guard strives, when conducting a boarding, for a proper balance between the intrusion into the activities of law abiding individuals and the Coast Guard mission of enforcing the law.

Occasionally, the Coast Guard will receive a complaint that a boarding was conducted improperly. These complaints involve a very small fraction of the boardings that take place annually. Nevertheless, any complaints of boarding contrary to the Coast Guard policy will be investigated. Complaints should be directed to the Coast Guard District Commander, or they may be made to:

**Commander (ole)
Eleventh Coast Guard District
400 Oceangate
Long Beach, Ca 90822-5399
(213) 499-5400 or
(213) 499-5380 24 hrs. a day**

ZERO TOLERANCE POLICY

The Zero Tolerance Policy, as enforced by the U.S. Coast Guard, is simply the strict enforcement of existing law to reduce the demand for illegal drugs and improve safety on the water by taking action against illegal

drug possession aboard boats. The Coast Guard will strictly enforce the Zero Tolerance Policy while conducting routine boardings and inspections. If personal amounts of illegal drugs are discovered on a U.S. vessel in U.S. waters, the Coast Guard will take appropriate law enforcement action which in certain circumstances can include seizure of the vessel and arrest of those in possession of the drugs.

FOREIGN FISHING ACTIVITIES OFF THE COAST OF THE UNITED STATES

The area over which the United States exercises fishing management jurisdiction changed in March 1977. In accordance with the Magnuson Fishery Conservation and Management Act of 1976, the United States exercises exclusive fishery management authority over:

- 1) All species of fish, except tuna, within the fishery conservation zone. This zone extends seaward to 200 miles.
- 2) All anadromous species (salmon, steelhead) which

spawn in the United States throughout their migratory range beyond the fishery conservation zone, except within a foreign country's recognized fishery zone.

- 3) All United States' Continental Shelf fishery resources, even if beyond the fishery conservation zone. Such resources include American lobster, species of coral, crab, abalone, conch, clam, sponge, and others.

EXPANSION OF THE TERRITORIAL SEA OF THE UNITED STATES OF AMERICA

On December 28, 1988, the President, by Presidential Proclamation, proclaimed the extension of the territorial sea of the United States of America, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and other outlying areas over which the United States exercises sovereignty.

The territorial sea of the United States henceforth extends to twelve nautical miles from the baselines of the United States determined in accordance with international law.

In accordance with international law, as reflected in the applicable provisions of the 1982 United Nations Convention on the Law of the Sea, within the territorial sea of the United States, the ships of all countries enjoy the right of innocent passage and the ships and aircraft of all countries enjoy the right of transit passage through international straits.

Nothing in the proclamation:

- (a) extends or otherwise alters existing federal or state law or any jurisdiction, rights, legal interests or obligations derived therefrom; in particular, the boundary between state waters and the Exclusive Economic Zone for the purposes of the Magnuson Fishery Conservation and Management Act does not change;
- (b) impairs the determination, in accordance with international law, of any maritime boundary of the United States with a foreign jurisdiction.

Official nautical charts for the coastal United States, which are published by the Department of Commerce, National Ocean Service, will, as revised, depict the United States territorial sea boundary. The seaward boundary of the United States Exclusive Economic Zone does not change.

SMUGGLING

Significant amounts of contraband, specifically narcotics, enter the United States via vessels. The most

common drugs smuggled are marijuana, hashish, and cocaine. The Coast Guard aims to prevent drug traffic by interdicting drug-carrying vessels at sea. Mariners observing activity or having information that a vessel may be involved in narcotics trafficking are requested to contact the nearest Coast Guard unit or:

**Commander (ole)
Eleventh Coast Guard District.
400 Oceangate
Long Beach, Ca. 90822-5399
(213) 499-5400 or
(213) 499-5380 (24 hr. number)**

Any report should include, if available: Name, homeport, flag displayed, date, time and position, estimated course and speed, description and color of vessel. An incomplete report is better than no report.



**Coast Guard 82' Patrol Boat during
Law Enforcement Patrol**

COAST GUARD POLICY ON STOLEN BOAT REPORTS

Due to its status as a maritime law enforcement agency, and because of its high visibility and availability to the boating public, the Coast Guard is often the first agency approached by persons whose boats have been stolen. While the Coast Guard by no means has sole responsibility or plenary authority for dealing with such matters, guidelines were issued to clarify the Coast Guard's duties and authority in an

effort to be more responsive to the boating public.

Previously, there was some confusion surrounding the Coast Guard's proper role in stolen vessel cases. This was due to a lack of criteria for determining whether a particular case might involve a violation of Federal Law. Under the current guidelines, the Coast Guard will keep a file on any stolen vessel case, issue a vessel lookout, conduct search/harbor checks as appropriate, and coordinate action with appropriate federal, state, and local authorities.

The intent is to respond affirmatively by offering assistance in all cases, and to the maximum extent within the law provide an effective recourse in those instances in which no other agency is willing or able to pursue the case.

HIJACKING DANGER

The U.S. Coast Guard warns California boaters of possible danger from hijacking and acts of piracy along the Pacific Coast. While the incidence of known or suspected hijacking has been relatively small in the past few years, the Coast Guard says that the possibility of hijacking exists in the Pacific just as it does in the Atlantic, Gulf of Mexico, and Caribbean waters.

The Coast Guard stresses that most of the actual hijacking incidents have been carried out by persons who came aboard with the vessel operator's permission and knowledge.

Protection for vessels and crews on the high seas and in remote or out-of-the-way places is primarily dependent upon the alertness of vessel operators. However, certain preventative measures can assist in lessening hijacking possibilities.

First, vessel operators should know the crew, particularly the hired crew. Tag-along guests from the marina should be identified as well.

Insist on positive identification of U.S. citizens through the use of the social security card and a secondary identification which has a picture or physical description of the person. Check the passport, entry visa, or alien registration of non-U.S. citizens.

Before departure, personally deliver or mail the complete crew and passenger list to a relative or trusted friend along with a float plan and instructions to notify the U.S. Coast Guard if you fail to arrive at your destination after a reasonable time. Let all personnel aboard your vessel know about this precaution. Before leaving the dock or mooring, make a thorough check of the vessel for stowaways.

When going to the assistance of anyone in apparent distress during the voyage, as any good sailor is

expected to do, try to notify the nearest Coast Guard radio facility or any coastal radio station and describe the situation. While preparing to render assistance, be alert to any unusual situation and be wary when the apparently distressed person insists on boarding your vessel.

When departing on a foreign cruise from a U.S. Port, consider taking time to clear with the local Customs agent, though this is not required on a pleasure craft. In addition to providing the complete crew manifest, list on a Customs Form 4455 all firearms, high value personal property and portable vessel equipment. Retain a certified copy to save trouble in foreign ports and in clearing Customs on the return to the United States.

REPORTING OF DISCHARGE OF OIL OR HAZARDOUS SUBSTANCES

All reports of oil or chemical spills should be made directly to the National Response Center (NRC) at the toll free number **1 800 424-8802**. The NRC is manned twenty-four hours a day by personnel specifically trained in handling reports of water pollution. The NRC duty officer will record the information received and pass it to the appropriate Coast Guard unit so that the report may be investigated immediately. Should it not be possible to use the toll free number, reports of spills can be made directly to any Coast Guard unit, provided the responsible party notifies the NRC as soon as possible.

CLEANUP OF OIL DISCHARGE

A party responsible for the discharge of oil into the navigable waters of the United States is required to remove as much of the oil as possible, using mechanical means such as containment booms, vacuum trucks, absorbent pads, etc. It is unlawful to introduce into the environment any chemical means to mitigate an oil spill without permission from the Federal On-scene Coordinator (OSC). This includes the use of detergents, dishwashing soap, and solvents to disperse an oil sheen or slick.

CLEAN WATER ACT

Section 311 of the Clean Water Act (CWA) as amended (33 USC 1321 et seq.) prohibits the discharge of harmful quantities of oil or hazardous substances into or upon U.S. navigable waters or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act

of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act of 1976). Further, anyone in charge of a vessel, an onshore facility, or an offshore facility which discharges in violation of the Act is required to notify the Coast Guard as soon as they have knowledge of the spill. This notification is to be made to the National Response Center by the most rapid means available.

The maximum penalty for discharging a harmful quantity of oil or hazardous substances is \$5,000 and may be assessed against the owner, operator or person-in-charge of the source. The maximum penalty for failure to notify the Coast Guard of a discharge is \$10,000 fine or one year imprisonment or both and may be assessed against the person in charge of the vessel or facility.

When a discharge of oil or hazardous substance occurs, the owner or operator is liable to the U.S. Government for removal costs within established limits of liability. These limits are the greater of \$125,000 or \$125 per gross ton for inland oil barges; \$250,000 or \$150 per gross ton (whichever is greater) for vessels carrying oil or hazardous substance cargo and \$150 per gross ton for all other vessels. Onshore and offshore facilities have a maximum liability of \$50,000,000. For both vessels and facilities, if the discharge was caused by negligence or was intentional, the owner or operator is then liable for the actual costs without limit.

The penalty for violations of regulations issued under the authority of section 311(j) of the CWA (33 USC 1321(j)) is a civil penalty of not more than \$5000.

For purposes of this Act the term "U.S. Navigable Waters" is not limited in definition by the element of "Navigability" but encompasses the river systems and tributaries extending upstream to the sources as well as the territorial sea.

Hazardous quantities of oil have been defined by the U.S. Environmental Protection Agency as those which violate applicable water quality standards or cause a film or a sheen upon or discoloration of the surface of the water or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines (40 CFR 110.3).

THE REFUSE ACT OF 1899 (33 USC 407)

The act prohibits anyone from throwing, discharging or depositing any refuse matter of any kind into U.S. navigable waters or tributaries of navigable waters.

The only exceptions to this prohibition are liquids flowing from streets or sewers and discharges made from shore facilities under a permit granted by the U.S. Army Corps of Engineers. Violators of the Refuse Act are subject to a fine of not less than \$500 or more than \$2,500 or imprisonment for not less than 30 days nor more than 1 year or both a fine and imprisonment.

MARPOL 73/78

Annex I of the International Convention for the Prevention of Pollution From Ships, 1973, as modified by the Protocol of 1978, better known as MARPOL 73/78 went into effect October 2, 1983.

The convention requires tankers of 150 gross tons and above, and all ships of 400 tons and above to install equipment to control overboard discharge of oil or oily waste. Vessels are initially surveyed and issued an International Organization For Pollution Prevention (IOPP) Certificate if determined to be in compliance and then surveyed annually to ensure that installed equipment is still operating satisfactorily. Maintenance of an Oil Record Book to log any internal or external transfers of oil and oily residues, is also required.

The requirements apply to all ships operating in the waters of a country which has signed the convention, even if the ship is not registered in such a country. The Coast Guard conducts boardings of U.S. and foreign vessels in port or offshore within U.S. jurisdiction to ensure vessel compliance and conducts aerial overflights to identify suspected dischargers.

As of March 10, 1986, each terminal or port in the United States that services oceangoing tankers, or cargo ships over 400 gross tons, must be capable of receiving oily wastes. These terminals must have a "Certificate of Adequacy" to attest to that fact. Vessels may be denied entry to terminals not complying with this section of the regulations.

Annex II of MARPOL 73/78 entered into force on April 6, 1987. This annex concentrates on standards aimed at reducing both accidental and operational pollution from chemical tankers. The regulations which implement Annex II adopt a number of chemical tanker equipment and operating requirements that shift the emphasis of pollution control away from waste management toward improved cargo recovery. The vessel regulations are contained in 46 CFR Parts 98, 151, and 153, and 33 CFR Part 151. They apply to all self propelled ocean going ships and barges carrying noxious liquid substances (NLS) in bulk. The regulations in 46 CFR Part 98 apply to oceangoing ships when carrying NLS cargo in portable tanks. The

vessel regulations in 33 CFR Part 151.31 through 151.45 apply to oceangoing ships when carrying oil-like Category C and D NLS cargo listed in Table 1 and Category D NLS cargo listed in Table 2 of 33 CFR 151.

Annex II limits the quantities of noxious liquid substances that ships may discharge to the sea. Substances regulated by Annex II are assigned to one of four pollutions categories (A, B, C or D) according to the aquatic toxicity of the product and other hazards to the marine environment. Category A presents the greatest pollution threat. Those cargoes not yet classified by the International Maritime Organization may be carried on ships provided written permission is received from the Coast Guard. The definition of "hazardous material" has been revised to include the NLS substances listed in Table 1 of 46 CFR Part 153 and Tables 1 and 2 of 33 CFR Part 151.

The master or person in charge of the ship must make an entry in the Cargo Record Book following completion of certain cargo related operations. This book must be retained onboard the vessel.

As a party to MARPOL, the U. S. is obligated to ensure the adequacy of reception facilities to receive wastes retained on board ships that comply with MARPOL discharge provisions. The Coast Guard Captain of the Port will issue a Certificate of Adequacy to ports or terminals that meet certain criteria. Regulations are found in 33 CFR Part 158.

Annex V of MARPOL 73/78 went into effect December 31, 1988. This Annex is designed to reduce the introduction of ship generated garbage into the marine environment. Annex V prohibits ships from discharging plastics, limits other types of garbage discharges, and requires that adequate reception facilities be provided at ports and terminals to receive ship generated garbage. A particular focus of Annex V is to prevent the discharge of plastics, including synthetic fishing nets and other persistent debris into the marine environment.

Regulations implementing Annex V were effective May 30, 1989. The regulations apply to U.S. flag vessels anywhere in the world and to foreign flag vessels in U.S. waters out to the 200 mile limit of the Exclusive Economic Zone. Vessels covered by these regulations include recreational, and fishing vessels of any size and type and oil rigs and platforms. In addition to prohibiting the disposal of plastic refuse, the regulations restrict the dumping of other ship-generated garbage at sea and require U.S. ports and terminals, including recreational marinas, commercial fishing facilities, and mineral and oil industry "shore bases," to

provide adequate facilities for receiving garbage. The facilities can be either on site or mobile. Any terminal required to have an Annex I (oily waste reception) or Annex II (noxious liquid substance) Certificate of Adequacy must also have Annex V Certificate of Adequacy. Certificates of Adequacy are obtained by applying to the local Coast Guard Captain of the Port /Marine Safety Office.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

In December 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (P.L. 96-510, 42 U.S.C. 9601 et seq.), commonly known as Superfund, to address the problems of hazardous substance spills. The Superfund legislation was developed after a number of hazardous waste sites, most notably the Love Canal in New York, gained national media attention. The attention on these sites revealed a significant gap in Federal statutory authority: while the Federal government had a mandate to respond to spills of oil and some hazardous substances to navigable waters, Federally funded responses to spills or disposals that affected ground water or other non-navigable drinking water sources, the air, or the environment were not covered by any Federal law. As a consequence, the Federal government's ability to respond to hazardous substance incidents was limited.

CERCLA provided the Federal government with the authority to clean up hazardous substance releases that affect any environmental media. The primary limitation on the authority is that CERCLA covers only approximately 700 hazardous substances; oil-based fuels and natural gas fuels are not covered. Under CERCLA, the Federal government can identify a hazardous substance release and take immediate removal or remedial action, using Superfund monies. The government can then sue the responsible parties to recover the cost of the action.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA)

In 1985, the National Response Team conducted a survey to assess the chemical emergency preparedness and response capabilities at the Federal, state, and local levels. The survey revealed that contingency plans were often poorly done or totally lacking. Training was limited; state responders were frustrated by the low priority given to emergency response training. The

survey found that response capability varied greatly from state to state. Many states had only limited amounts of response equipment. The survey also revealed some problems with Federal equipment availability.

Soon after the survey was distributed, the question of preparedness took on heightened importance as the potentially disastrous consequences of chemical accidents were highlighted by the accident in Bhopal, India, where a release of methyl isocyanate killed over 2,000 people. A subsequent release of aldicarb oxime from a facility at Institute, West Virginia intensified concern in the U.S.

Congress enacted Title III of the Superfund Amendments and Reauthorization Act (SARA) (P.L. 100-499) in October 1986. Title III is also known as the Emergency Planning and Community Right-to-Know Act (42 U.S.C. 11001 et seq.). Title III requires states to form Local Emergency Planning Committees and develop plans for responding to extremely hazardous substance emergencies and requires facilities to report a variety of information on hazardous chemicals they store or use.

DRUG AND ALCOHOL TESTING OF MARITIME PERSONNEL

A final rule was published on November 21, 1988, which established drug and alcohol testing requirements for maritime industry personnel. The Coast Guard believes these rules will discourage drug and alcohol use by commercial vessel personnel, reduce the potential for marine casualties related to drug and

alcohol use, and enhance the safety of the maritime transportation industry. There are four types of chemical tests required: pre-employment, periodic, random, and post casualty.

The pre-employment test is required of all crewmembers before they can be hired by an employer. It is not required if they have already passed a pre-employment or periodic test in the last six months or passed a random test in the last twelve months.

The periodic test is required at the same time as any physical exam mandated by regulations. It is not required if a crewmember has passed a pre-employment test in the last six months or passed a random test in the last twelve months.

The random test is required of 50% of all crewmembers annually. The post casualty test is required of all persons directly involved in a "serious marine incident", as defined in 46 CFR 4.03-2. Post casualty testing applies to any vessel on the navigable waters of the United States and to U.S. vessels worldwide.

Additionally, the regulations require an employer to have a crewmember tested if he is suspect of using drugs.

All chemical tests are conducted to check for drugs except the post casualty test which also tests for alcohol.

All testing cost are to be borne by the employer except the periodic test which must be paid by the employee.

Except for the periodic test, testing requirements take effect in accordance with the following timetable:

EMPLOYER SIZE	TEST TYPE	REQUIRED DATE
More than 50 employees	Pre-employment	21 July 1989
	Serious Marine incident	21 December 1989
	*Reasonable Cause	21 December 1989
	**Random	21 December 1989
11 to 50 Employees	Pre-employment	21 July 1989
	Serious Marine incident	21 December 1989
	*Reasonable Cause	21 December 1989
	**Random	21 December 1990
10 or less Employees	All tests Required	21 December 1990

*Employers should be aware that "Reasonable Cause" testing may, in some cases, already be required by existing regulations found in 33 CFR Part 95.

**On December 18, 1989, the U.S. District Court for the District of Columbia joined the implementation of that portion of the Coast Guard's drug testing rules which would have required marine employers to implement random drug testing beginning on 21 December, 1989. Until further notice no random testing is required. All other portions of the chemical testing programs remain in effect in accordance with 46 CFR 16.205.

OPERATING A VESSEL WHILE INTOXICATED

In 1988 the Coast Guard issued rules setting standards applicable to operating recreational and commercial vessels while intoxicated. These regulations set a federal standard for behavioral signs of intoxication and an independent blood alcohol concentration (BAC) standard. The regulations are found in Part 95 of Title 33, Code of Federal Regulations.

These regulations apply to all vessels (except a public vessel) operating on U.S. waters and to a vessel owned in the U.S. and operating on the high seas. This includes a foreign vessel operating in U.S. waters. The regulations are also applicable at all times to Coast Guard inspected vessels.

Operating a Vessel

An individual is considered **operating** a vessel when:

- 1) The individual has an essential role in the operation of a recreational vessel underway, including but not limited to navigating or controlling the vessel's propulsion system; or
- 2) The individual is a crewmember, pilot or a watchstander not a regular member of the crew of a vessel other than a recreational vessel.

Standard of Intoxication

A person operating any vessel is deemed intoxicated if the federal blood alcohol concentration (BAC) exceeds the following standards;

- 1) .10% percent for operators of recreational vessels;
- 2) .04% percent for operators of all other vessels, including commercial vessels; or
- 3) if the effects of the intoxicant(s) consumed by the individual on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation.

It should be noted that these regulations also provide that the federal standards will conform to any enacted state intoxication (BAC) standard, higher or lower than .10%, on waters within the geographic boundaries of that state.

Acceptable evidence of intoxication includes but is not limited to:

- 1) Personal observation of an individual's manner, disposition, speech, muscular movement, general appearance or behavior; or
- 2) A chemical test.

Reasonable Cause for Directing a Chemical Test

Only a Coast Guard official or other law enforcement officer or a marine employer may direct an individual

operating a vessel to undergo a chemical test when reasonable cause exists. Reasonable cause exists when:

- 1) The individual was directly involved in a marine causality; or
- 2) The individual is suspected of being in violation of the intoxication standards defined in the regulations.

Refusal To Submit To Testing

If an individual refuses to submit to a chemical test when directed by a law enforcement officer based on reasonable cause, evidence of refusal is admissible in any administrative proceeding and the individual will be presumed to be intoxicated. This includes administrative proceedings looking toward suspension or revocation of an individual's Coast Guard license or document.

If an individual refuses to submit to a chemical test when directed by a marine employer based on reasonable cause, evidence of the refusal is admissible in any administrative proceeding. The term "marine employer" is defined as the owner, managing operator, charter, agent, master or person in charge of a vessel other than a recreational vessel.

General Operating Rules For Vessels Subject To Coast Guard Inspection Under Chapter 33 Of Title 46, United States Code

While on board a vessel subject to inspection, a crewmember (including a licensed individual), pilot or watchstander not a regular member of the crew:

- 1) Shall not perform or attempt to perform any scheduled duties within four hours of consuming any alcohol;
- 2) Shall not be intoxicated at any time;
- 3) Shall not consume any intoxicant while on watch or duty; and,
- 4) May consume a legal non-prescription or prescription drug provided the drug does not cause the individual to be intoxicated.

Responsibility For Compliance

The marine employer shall exercise due diligence to assure compliance with the applicable provision of this part. If the marine employer has reason to believe that an individual is intoxicated, the marine employer shall not allow that individual to stand watch or perform other duties.

Penalties

An individual who is intoxicated when operating a vessel shall be:

- a. Liable for a civil penalty of not more than \$1000.00
- b. Fined not more than \$5000.00, imprisoned for not

more than one year, or both.

An individual holding a Coast Guard license or document who is found to be in violation of these regulations may also be subject to suspension and revocation proceedings.

In conclusion, operation of vessels by intoxicated individuals poses unacceptable risks to the lives and safety of the public, however, the problem will not disappear due solely to these regulations. It is

incumbent upon individuals who operate vessels to recognize the risks posed by drunk and drugged vessel operators and to take appropriate action to ensure compliance with the rules. Through a cooperative effort by the Coast Guard, other federal agencies, state and local law enforcement officials, marine employers and the public, we can significantly reduce the incidence of alcohol and drug related marine casualties.

CHAPTER 8

NAUTICAL CHARTS AND RELATED PUBLICATIONS

COAST GUARD LOCAL NOTICE TO MARINERS

Mariners in California waters should rely on the Eleventh Coast Guard District Local Notice to Mariners (LNM) as the **PRIMARY** source of marine information, with Broadcast Notice to Mariners (BNM) providing supplementary, last minute information. The LNM may be obtained free of charge by making application to:

**Commander (oan)
Eleventh Coast Guard District
400 Oceangate
Long Beach, CA 90822-5399
(213) 499-5410**

The LNM is published weekly and contains important information concerning aids to navigation, updating of nautical charts and publications, hazards to

navigation, military operations, marine construction sites, marine events and regattas, and other items of interest to the mariner. The LNM is divided into nine areas (denoted by Roman numerals) as the



following describes:

I. SPECIAL NOTICES

Information of a special nature that affects the marine environment, such as electronic navigation availability, military operations, changes in regulations pertaining to pilotage and other operations affecting marine traffic.

II. DISCREPANCIES

DISCREPANCIES

CORRECTED

Contains a list of all discrepancies to aids to navigation, both federal and privately maintained, and those discrepancies which have been corrected from the last published list. A discrepancy is any change in the status of an aid to navigation that is different than what is published in the Light List or what is charted. Information is listed by Light List number.

III. TEMPORARY CHANGES / TEMPORARY CHANGES CORRECTED

Contains a list of all temporary changes to aids to navigation, both federal and privately maintained, and those temporary changes which have been corrected from the last published list. Information is listed by Light List number.

IV. INDEX OF WATERWAYS

Lists the waterways and nautical charts affected by Section V Chart Corrections, Section VI Advance Notice of Changes in Aids to Navigation, and Section VII Proposed Changes in Aids to Navigation.

V. CHART CORRECTIONS

This section lists all new establishments, deletions and corrections to aids to navigation, information on wrecks, hazards to navigation and channel information. *National Ocean Service Chart No. 1, Nautical Chart Symbols and Abbreviations* should be consulted for applying chart corrections to your nautical chart. Information is listed by chart number.

VI. ADVANCE NOTICE OF CHANGES TO AIDS TO NAVIGATION

This section contains advance notice of projects that affect additions, changes or deletions of aids to navigation.

VII. PROPOSED CHANGES TO AIDS TO NAVIGATION

This section contains notice of proposed projects still in the planning stage that affect additions, changes or deletions of aids to navigation. A 30 day comment period is included for the maritime community to input their ideas about the project.

VIII. GENERAL INFORMATION

This section contains information regarding construction and dredging areas, oceanographic operations, geophysical surveys, oil drilling ships, bridge information and marine events. Information is listed by location, starting from the Mexican border northward to the California-Oregon border.

IX. ENCLOSURES

Corrections to Light List Volume VI, chartlets, channel depth tabulations and other preprinted information is included in this section as an enclosure to the LNM. Corrective information for nautical charts and publications included in this section are printed on one side for cut and paste corrections.

PACIFIC AREA LOCAL NOTICE TO MARINERS

If you are planning to voyage outside the Eleventh

Coast Guard District, prior to departing you should contact the applicable Coast Guard District in order to receive Local Notice to Mariners for that area. The following is a list of Coast Guard Districts in the Pacific and their area of coverage:

Oregon, Washington, Idaho & Montana

Commander (oan)
Thirteenth Coast Guard District
915 Second Avenue
Seattle, WA 98174-1067
(206) 442-5864

Hawaii, American Samoa, Marshall, Marianas & Caroline Islands and Subic Bay, Phillipines

Commander (oan)
Fourteenth Coast Guard District
300 Ala Moana Blvd.
Honolulu, HI 96850-4982
(808) 541-2317

Alaska

Commander (oan)
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, AK 99802-1217
(907) 586-7367

When making changes in your name or mailing address, please include the identification number in the upper righthand corner of the mailing label.

DEFENSE MAPPING AGENCY

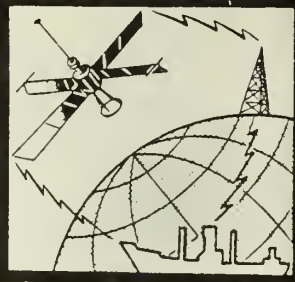
Defense Mapping Agency Hydrographic Topographic Center (DMAHTC) provides hydrographic, navigational, topographic, and geodetic data, charts, maps, and related products and services to the Armed Forces, other Federal agencies, the Merchant Marine and mariners in general. Publications include Sailing Directions (pilots), List of Lights, Table of Distances, Radio Navigational Aids, International Code of Signals, American Practical Navigator (Bowditch) and Notices to Mariners. DMA charts and publications are listed in the Hydrographic Regional Catalog Volumes I through X.

DMA WEEKLY NOTICE TO MARINERS

Subscriptions are limited to bona fide mariners who, when submitting requests, must include a sound justification for the worldwide coverage provided by this publication. The Notice to Mariners is issued free

of charge; however, subscribers outside the continental United States must pay for shipping cost.

NOTICE TO MARINERS



Weekly Notice To Mariners Heading

DMA SUMMARY OF CORRECTIONS

Notice to Mariners charts and publications corrections are compiled in the Summary of Corrections published by Defense Mapping Agency. Those corrections effective since 5 July 1975 are included in Volume 4 of the Summary of Corrections. All corrections subsequent to that date which remain effective, appear in each issue. The Summary of Corrections Volume 5 contains corrections for World and Ocean Basin Charts, U.S. Coast Pilots, Sailing Directions, Fleet Guides, and other miscellaneous publications. Each volume is published semi-annually and may be purchased individually or on an annual subscription basis. The cost of an annual subscription to each volume is two times the issue price. Subscribers outside the continental United States must also pay for shipping costs.

HOW TO ORDER DMA PUBLICATIONS

- 1) DMA Sales Agents are the prime source of supply for items listed in the DMA Catalog. Sales Agents are located in many seaports throughout the world.
- 2) If there is no Sales Agent in your area, orders may be mailed to the Defense Mapping Agency. Telephone orders are discouraged except in bona fide emergencies.
- 3) If a company form or ordinary stationery is used, it will expedite the filling of the order if the following information is included;
 - a) The name and exact mailing address where the items are to be sent.
 - b) A serial or control number as a reference for the order (note: You supply the number. Any 4-digit number will do, as long as the same number is not used twice in one month).
 - c) The Julian Date of the order. A Julian date consists of two elements: the last digit of the calendar year and the numeric consecutive date of the calendar year (e.g., 9059 represents 28

Feb. 1989).

d) The complete DMA stock number.

e) The quantity desired.

- 4) Orders must be accompanied by a check or money order payable to the Treasurer of the United States for the amount of the purchase. The check or money order must be drawn on a U.S. bank or payable in U.S. currency. Items will be mailed at Government expense at regular printed matter rates. Expense for special handling or special mail modes such as AIR MAIL, PRIORITY MAIL, etc., must be borne by the purchaser. Postage stamps or Government Printing Office coupons cannot be accepted. Items sent in conformance with the order are not returnable for exchange or refund. Send orders to:

DIRECTOR

**Defense Mapping Agency
Office of Distribution Services
Attn: CSC-PMA
Washington, DC 20315-0020
Telephone: 1 (800) 826-0342**



AUTOMATED NOTICE TO MARINERS

The Defense Mapping Agency Hydrographic / Topographic Center (DMAHTC) provides a computer accessed service as a source of up to date marine information for the user called the Automated Notice to Mariners System (ANMS). The ANMS contains the data used to produce the weekly Notice to Mariners publication and other information of use to the mariner. The ANMS currently contains information on Chart Corrections, Broadcast Warnings, MARAD Advisories, Defense Mapping Agency (DMA) List of Lights, Anti-Shipping Activities, Oil Drill Rig Locations, corrections to DMA Hydrographic Product Catalogs and U.S. Coast Guard Light Lists. ANMS is accessed through the Navigation Information Network (NAVINFONET). NAVINFONET is made up of commercial telephone lines, satellite links, and other

commercial communication services. ANMS should not be used as a replacement for the weekly Notice to Mariners or the Local Notice to Mariners. To gain access to the ANMS, permission must be granted and a user identification code assigned. This may be done by writing to the Defense Mapping Agency at the following address:

**Director
DMAHTC
Code: HNN
Washington, D.C. 20315-0030**

THE NATIONAL OCEAN SERVICE COAST PILOTS

These are a series of nine nautical books that cover a wide variety of information important to navigators of U.S. coastal and intercoastal waters, and the waters of the Great Lakes. Most of this book information cannot be shown graphically on the standard nautical charts and is not readily available elsewhere. Coast Pilot subjects include navigational regulations, outstanding landmarks, channel and anchoring peculiarities, dangers, weather, ice, routes, pilotage, and port facilities.

CAUTION: The Coast Pilot is corrected through the dates of the Notice to Mariners shown on the title page and should not be used without reference to the Notice to Mariners issued subsequent to those dates. Changes to the Coast Pilot that affect the safety of navigation and are reported to NOS in the interim period between editions are published in the Local and Weekly Notice to Mariners.

TIDE TABLES

Tide Tables are issued annually by NOS in advance of the year for which they are prepared. These tables include predicted times and heights of high and low waters for every day in the year for a number of reference stations and differences for obtaining similar predictions for numerous other places. Tide Tables also include other useful information such as a method of obtaining heights of tide at any time, local mean time of sunrise and sunset for various latitudes, reduction of local mean time to standard time, and time of moonrise and moonset for various ports.

TIDAL CURRENT TABLES

Tidal Current Tables for the coasts of the United States are issued annually by NOS in advance of the year for which they are prepared. These tables include daily predictions of the times of slack water and the

times and velocities of strength of flood and ebb currents for a number of waterways, together with differences for obtaining predictions for numerous other places. Also included is information on methods for obtaining the velocity of current at any time, duration of slack, coastal tidal currents, wind currents, combination of currents, and current diagrams. Information on the Gulf Stream is included in the tables for the Atlantic coast.

TIDAL CURRENT CHARTS

Tidal Current Charts are published by NOS for various localities. These charts depict the direction and velocity of the current for each hour of the tidal cycle. They present a comprehensive view of the tidal current movement in the respective waterways as a whole, and when used with the proper current tables or tide tables supply a means for readily determining for any time the direction and velocity of the current at various localities throughout the areas covered.

TIDAL CURRENT DIAGRAMS

Tidal Current Diagrams are a series of 12 monthly computer constructed diagrams used in conjunction with the Tidal Current Charts for a particular area. The diagrams present a simplified method for calculating the speed and direction of the tidal currents in bays, estuaries, and harbors.

HOW TO ORDER NATIONAL OCEAN SERVICE CHARTS AND PUBLICATIONS

Sales Agents of the National Ocean Service for charts, Coast Pilots, Tide Tables, Tidal Current Tables, Tidal Current Diagrams, and Tidal Current Charts are located in many U.S. ports and in some foreign ports. A list of NOS Sales Agents is included in Enclosure (1) of this publication.

NOS charts and publications may be ordered directly from NOS. Ordering procedure is the same as for DMA publications. Send orders to:

**National Ocean Service, Distribution Branch
(N/CG-33),
6501 Lafayette Avenue,**

Riverdale, MD. 20737.

Telephone: (301) 436-6990.

INLAND AND INTERNATIONAL RULES

The Coast Guard encourages all boat operators to familiarize themselves with navigation rules which govern the conduct of all vessels on international and inland waters. These rules also establish navigation lights and dayshapes as well as actions to be taken by vessels to avoid collision. When marine accidents involving vessels occur, liability is apportioned on the basis of adherence to the 38 collision avoidance rules.

§88.05 of Title 33 Code of Federal Regulations requires the operator of each self-propelled vessel of 12 meters or more in length to carry on board and maintain for ready reference a copy of this publication. Operators are liable to a civil penalty of not more than \$5,000 for failure to comply with this requirement. The vessel operator is responsible for knowing, understanding and following the applicable navigational rules.

The International Rules are applicable on waters outside of established navigational lines of demarcation. These lines are called COLREGS Demarcation Lines and delineate those waters where mariners shall comply with the International and Inland Rules. The demarcation lines are printed on most navigational charts and published in the Navigational Rules.

The public may purchase copies of the NAVIGATIONAL RULES (Commandant Instruction M16672.2A) from the Government Printing Office. Copies may be ordered from:

**Superintendent of Documents,
U.S. Government Printing Office
Washington D.C. 20402
The stock number is 050-012-00205-3,
and the cost is \$6.00 each.**

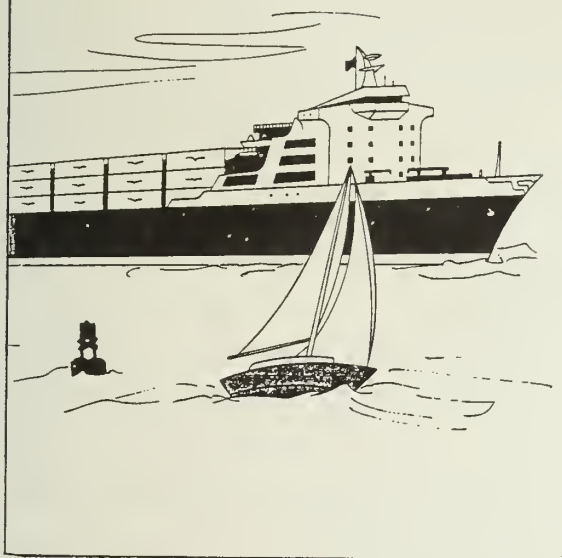
Telephone orders using Mastercard or Visa will be accepted by calling (202) 738-3238.

U.S. Department
of Transportation
**United States
Coast Guard**



NAVIGATION RULES

INTERNATIONAL—INLAND



CORRECTIONS TO NAUTICAL CHARTS

Mariners are requested to report errors and omissions noted on National Ocean Service charts so that corrections can be made on future editions. Uncharted discrepancies such as shoals, rocks, prominent landmarks, or marine construction, should be reported to:

**Commander (oan)
Eleventh Coast Guard District
400 Oceangate
Long Beach, Ca 90822-5399**

or

**Marine Charting Branch ATTN N/CG22
Charting and Geodetic services
NOS/NOAA
Rockville, Md 20852**

NAUTICAL CHART SYMBOLS AND ABBREVIATIONS

The latest symbols and abbreviations approved for use on all regular nautical charts published by the Defense Mapping Agency Hydrographic/Topographic Center and the National Ocean Survey are contained in the November 1984, 8th edition of Chart No. 1, United States of America Nautical Chart Symbols and

Abbreviations. This publication is available from the Defense Mapping Agency Office of Distribution Services and National Ocean Survey, NOAA, and the sales agents of both organizations.

The introduction to this publication has been revised to better describe its contents, using a more easily read type format. A number of additional paragraphs are included on metric and fathom charts, chart modernization, drying heights, buoys, heights, conversion scales, traffic separation schemes, names, correction dates, and special foreign symbols.

Section L-70 shows Buoys and Beacons of the IALA Buoyage System, Region A and a section in the back of the publication pictures Region A structures and light characteristics in full color. Section P adds more information on traffic separation lanes, tracks for deep draft vessels, and various sea boundary limits.

Section V lists abbreviations of principal foreign terms commonly used on charts. More complete information on unabbreviated foreign terms is provided in DMAHTC Sailing Directions volumes. Identification of these terms is helpful to the chart user. Many national languages are used beyond their country of origin; for example, Spanish in many Latin American countries and Portuguese in Brazil.

Certain reproductions of foreign charts published by DMAHTC may show symbols and abbreviations and other distinctive features that differ from those illustrated in Chart No. 1. The mariner is warned that the buoyage systems, shapes and colors used by other countries often have a different significance than the U.S. System.

On certain foreign charts reproduced by the United States, and on foreign charts generally, the symbols and abbreviations used may differ from U.S. Approved Standards. The value of the nautical chart depends upon the accuracy of the surveys on which it is based. The chart reflects what was found by field surveys and what has been reported to NOS Headquarters. The chart represents general conditions at the time of surveys or reports and does not necessarily portray present conditions. Significant changes may have taken place since the date of the last survey or report.

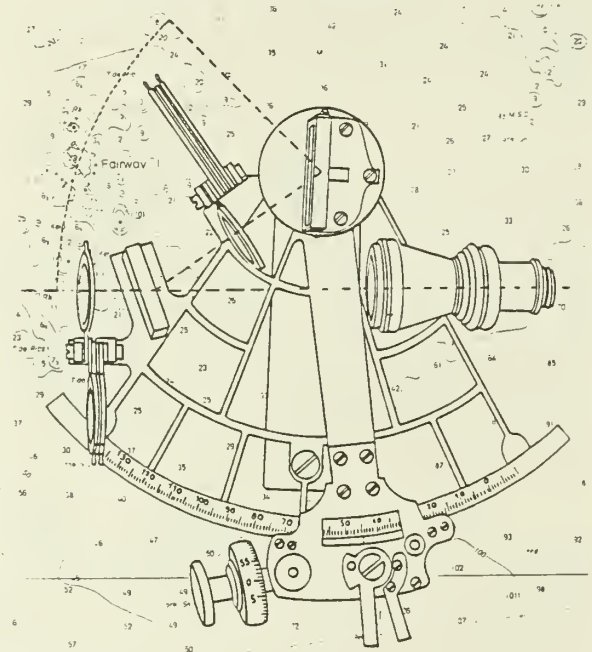
The date of a chart is of vital importance to the navigator. When charted information becomes obsolete, further use of the chart for navigation may be dangerous. Announcements of new editions of nautical charts are published in the Notices to Mariners and the Local Notice to Mariners.

CHART NO. 1

UNITED STATES OF AMERICA

NAUTICAL CHART

Symbols and Abbreviations



Eighth Edition
NOVEMBER 1984

HEIGHTS are in feet above the tidal datum used for that purpose on the charts, usually mean high water. However, the heights of decks of piers and wharves are given in feet above the chart datum for depths.

Information received by NOS from various sources concerning depths, dangers, currents, facilities and other subjects which have not been verified by Government surveys or inspections, is often included in Coast Pilots; such "unverified information" is qualified as "reported," and should be regarded with caution.

DEPTHS are in feet or fathoms, below chart datum of the chart unless otherwise stated. The controlling depth of a channel is the least depth within the limits of the channel; it restricts the safe use of the channel to drafts less than that depth. The centerline controlling

depth of a channel applies only to the channel centerline; lesser depths may exist in the remainder of the channel. The midchannel controlling depth of a channel is the controlling depth of only the middle half of the channel. Federal Project Depth is the design dredging depth of a channel constructed by the U.S. Army Corps of Engineers; the project depth may or may not be the goal of maintenance dredging after completion of the channel and, for this reason, project depth must not be confused with controlling depth. Depths alongside wharves usually have been reported by owners and/or operators of the waterfront facilities, and have not been verified by Government surveys; since these depths may be subject to change, local authorities should be consulted for the latest controlling depths.

In general, the Coast Pilots give the project depth for deep-draft ship channels maintained by the Corps of Engineers. The latest controlling depths are usually shown on the charts and published in the Notices to Mariners. For other channels, the latest controlling depths available at the time of publication are given.

IMPLEMENTATION OF NORTH AMERICAN DATUM OF 1983 (NAD 83)

Nautical charts presently are constructed based on one of a number of horizontal datums which are adopted to best represent individual regions around the world. The exact placement of lines of latitude and longitude on a nautical chart is dependent on the referenced datum. Charts of the United States are currently referenced to datums such as the North American Datum of 1927 (NAD 27), Puerto Rican (PR) Datum, Old Hawaiian Datum, and others. Through the use of satellites and other modern surveying techniques, it is now possible to establish global reference systems. As a result, the North American Datum of 1983 (NAD 83) has been identified to replace the Pacific Territorial Islands which will be compiled on World Geodetic Datum System 1984 (WGS 84). This datum is equivalent to the NAD 83 for charting purposes. The conversion to NAD 83 has begun on NOS charts, with full implementation expected to be accomplished over a ten year period.

What does this change in datum mean to the mariner?

It means that during the period of conversion, some charts will be referenced to the new NAD 83 datum, while others will still be referenced to the old former datum. Charted features will remain unaffected in their relationship with the surrounding area. Therefore, when comparing charts of the same area, referenced to different datums, no changes to charted features will be noticed since all features shift by approximately the same amount. The apparent

difference will be the shift of the latitude and longitude grid in relation to the charted feature. As a result, the geographic positions (latitude and longitude) of all charted features will change.

Each chart that is published carries a standard datum note identifying the datum used on that chart. (see example next column). In addition to the standard datum note, all charts that have been converted to NAD 83 will carry an additional Horizontal Datum Note, similar to the one listed below, that will inform the mariner if any correction must be made to the latitude and longitude when transferring geographic positions from the previous charted datum to NAD 83.

Mariners are cautioned that direct readout navigation systems provide latitude and longitude referenced to a specific datum. A navigation receiver referencing NAD 27 and used in conjunction with a NAD 83 chart will produce an error in position of approximately the average shift value published on the chart. For maximum accuracy in navigation, mariners using LORAN should plot positions using time delays to avoid reference to specific datums.

**ENSENADA HONDA
Mercator Projection
Scale 1:6,500
North American Datum of 1983
(World Geodetic System 1984)
HORIZONTAL DATUM**

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geodetic positions referred to the Puerto Rico datum must be corrected an average of 7.110 seconds southward and 1.148 seconds eastward to agree with this chart. The correction values are based on preliminary NAD 83 data.

In future Local Notices to Mariners, geographic positions will be listed in the datum of the current edition of the nautical chart on which the particular correction appears. This means that a chart correction of an aid to navigation which appears on more than one chart will list a different geographic position for charts of differing datums. The datum for each chart will be identified in all chart corrections published.

In Broadcast Notices to Mariners, a bearing and range from a fixed object will be given instead of two different geographic positions. This will reduce possible confusion, since the bearing and range will be the same for both datums.

Below is an example of how chart corrections will appear in the Local Notices to Mariners, and how the position of the same aid to navigation shown on charts of the same area can vary with differing datums

25653	9th Ed. 04/12/80 PR DATUM	(CGD7) 35/86
	ISLA DE CULEBRA – ENSENADA HONDA – CANAL DEL SUR	
	Add Punta Del Soldado Light,	
	Fl W. 2.5s 65ft 5M	18°16'47.9"N 65°17'14.9"W
25654	11th Ed. 01/04/86 NAD 83	(CGD7) 35/86
	ISLA DE CULEBRA – ENSENADA HONDA	
	Add Punta Del Soldado Light,	
	Fl W. 2.5s 65ft 5M	18°16'40.8"N 65°17'13.8"W

Mariners are reminded that no corrections to the geographic positions listed in the Local Notices to Mariners will be required, if you are using a chart with the same datum as that referenced in the chart correction. However, the correction listed in the Horizontal Datum Note must be applied if you are transferring a position from the previous referenced datum to a chart referencing NAD 83. Below is an example of the correction required if you were to transfer a geographic position from Chart 25653 (PR Datum) to Chart 25654 (NAD 83).

	Latitude	Longitude
(PR DATUM)	18°16'47.9"N	65°17'14.9"W
Correction	-7.1"	-1.1"
(NAD83)	18°16'40.8"N	65°17'13.8"W

Upon completion of the conversion, all mariners will be using a single chart datum which will conform to the increased accuracy available from satellite navigation system.

Questions on the implementation of NAD 83 can be answered by contacting:

Chief, Marine Chart Branch (N/CG22)
National Ocean Service/NOAA
6001 Executive Boulevard
Rockville, MD 20852

NAUTICAL CHARTS CONVERTED TO NAD 83 DATUM

The following list of Nautical Charts have been converted to North American Datum 1983 (NAD 83). Included are charts that cover the coastal and delta regions of California and is subject to change as charts are converted to North American Datum.

CHART NUMBER	EDITION NUMBER	EDITION DATE	CHART NUMBER	EDITION NUMBER	EDITION DATE
18010	15th	5/27/89	18662	16th	5/28/88
18022	26th	2/27/88	18663	1st	11/4/89
18603	15th	2/13/88	18680	24th	2/21/87
18620	18th	2/14/87	18685	28th	2/21/87
18640	19th	1/16/88	18686	12th	7/8/89
18649	53th	5/6/89	18687	10th	6/18/88
18650	41st	2/25/89	18700	15th	6/30/88
18651	36th	2/4/89	18703	21st	10/21/89
18652	26th	12/3/88	18725	22nd	12/5/87
18653	1st	12/3/88	18727	10th	12/5/87
18654	33rd	1/26/85	18740	31st	10/16/89
18655	52nd	7/14/84	18746	25th	6/28/86
18656	48th	5/27/89	18751	32nd	8/19/89
18657	13th	12/3/88	18762	13th	12/26/87
18658	24th	2/27/88	18772	43rd	12/26/87
18661	18th	5/7/88	18773	31st	6/18/88
			18774	6th	8/26/89

CHAPTER 9

BRIDGES

BRIDGE ADMINISTRATION

Bridges in the Eleventh Coast Guard District are administered by the Aids To Navigation and Waterway Management-Bridges Branch (oan-br), located at Coast Guard Island, Alameda, California. Questions regarding bridge operations, information about or violations of bridge regulations, and bridge permit applications should be directed to:

Commander (oan-br)
Eleventh Coast Guard District
Coast Guard Island
BLDG 10, Room 214
Alameda, Ca 94501-5100
(415) 437-3514

BRIDGE ADMINISTRATION, CIVIL PENALTIES

The Coast Guard Authorization Act of 1982 provides for the imposition of civil penalties by the Coast Guard as an additional remedy to seeking criminal prosecution. The Act also amended certain existing bridge acts to add the following new provisions:

1) DRAWBRIDGE OPERATIONS

- a) Lowering of appurtenance unessential to navigation - No vessel owner or operator shall signal a drawbridge to open for a nonstructural vessel appurtenance which is not essential to navigation or which is easily lowered. (i.e. radio and TV antennas, bimini tops, outriggers).
- b) No person shall unreasonably delay the opening of a draw opening after the proper signal has been given.

2) PROPER BRIDGE REPAIR

No owner or operator of any bridge, drawbridge or causeway shall endanger, unreasonably obstruct or make hazardous the free navigation of any navigable water of the U.S. by failure to keep the bridge, drawbridge or causeway and any accessory works in proper repair. Enforcement of alleged violations will be in accordance with the Civil and Criminal Penalties Proceedings laid out in 33 CFR 1.07.

3) PENALTIES

Whoever violates any rule or regulations relating to

bridges is liable to a civil penalty of not more than \$1000 for each said violation. Each day a violation continues constitutes a separate offense. Complaints or reports of improper operation of a drawspan, failure to maintain a bridge, and a vessel signaling a draw to open for a non-structural and non-essential appurtenance, shall be submitted to the 11th Coast Guard District Bridge Branch (oan-br) at the aforementioned address with copies of logs, statements of witnesses, pictures and other pertinent information.

SIGNALS BETWEEN VESSELS AND DRAWBRIDGES

The drawbridges in California respond to the following signals:

- 1) SOUND SIGNALS: A prolonged blast (4-6 seconds) followed by a short blast (1 second) sounded within a reasonable hearing distance of the bridge. The drawtender will respond in kind, unless the draw cannot be opened, in which case he will sound 5 short blasts.

NOTE: Mariners are advised that small hand-held airhorns may not always be heard by drawtenders, especially on a windy day. It may be prudent to accompany the sound signal for an opening with the visual signal.

- 2) VISUAL SIGNALS: A white flag by day or white, amber or green light by night, raised and lowered vertically in full sight of the bridge and facing the draw. When the draw can be opened immediately the drawtender will respond with a white flag by day or white, amber or green light by night, raised and lowered vertically in full sight of the vessel not more than 30 seconds after the opening signal is observed. When the draw cannot be opened immediately, or is open and must be closed immediately, the drawtender will respond with a red flag by day and a red light by night, swung back and forth horizontally in full sight of the vessel not more than 30 seconds after the opening signal is observed. This signal will be repeated until acknowledged in some manner by the requesting vessel.

DRAWBRIDGE REGULATIONS

Bridge regulations governing the operation of drawbridges in California are published in a free booklet. Requests should be sent to the 11th Coast

Guard District Bridge Branch (oan-br).

These regulations can also be found in the U.S. Coast Pilot 7, Pacific Coast: California, Oregon, Washington, sold by the NOS and its agents. **Changes and temporary departures from these regulations for bridge repairs are published in the Local Notice To Mariners.**

Some drawbridges require advance notice for opening. Advance notice telephone numbers and regulations for Northern California Drawbridges are included in Enclosure (2) of this publication.

DRAWBRIDGE OPERATION REGULATIONS: LOS ANGELES AND LONG BEACH HARBORS, CERRITOS CHANNEL

1) The draw of the **Commodore Schuyler F. Heim Highway Bridge**, mile 4.5 at Long Beach, shall open on signal; except from 6:30 AM to 8:00 AM and 3:30 PM to 6:00 PM Monday through Friday and Federal holidays, the draw need not be opened for the passage of vessels. The opening signal for the Commodore Schuyler Heim Bridge is three prolonged blasts. The acknowledging signal is two prolonged blasts followed by one short blast when the draw will open immediately and five short blasts when the draw will not open immediately. Channel 13 (156.65 MHz) or other assigned frequencies may be used.

2) The draw of the **Henry Ford Avenue Railroad Bridge**, mile 4.4 at Long Beach, shall be maintained in the fully open position except when a train is crossing or for maintenance. If the draw is in the closed position, the opening signal is two short blasts followed by one prolonged blast. The acknowledging signal is two prolonged blasts followed by one short blast when the draw will open immediately and five short blasts when the draw will not open immediately. Channel 13 (156.65MHz) or other assigned frequencies may be used.

BRIDGE CLEARANCES

Clearances are shown on navigational charts published by the National Ocean Service (NOS). For bridge clearance information in areas not shown on the nautical charts, contact the Bridge Branch. A directory of bridge clearances on the West Coast is available free of charge from the Bridge Branch.

RADIOTELEPHONE PROCEDURES BETWEEN VESSELS AND DRAWBRIDGES

Radiotelephones may be used to request bridge openings. When the request for draw opening and the answering acknowledgment is given by radiotelephone, sound or visual signals need not be used. Both vessel and bridge must continue to monitor the selected channels until the vessel has cleared the draw. If radiotelephone contact cannot be

BRIDGE LIGHTING AND OTHER SIGNALS

The Commandant of the Coast Guard revised the regulations for bridge lights and signals on 2 June 1986. The regulations are published in Title 33 CFR parts 117 & 118.

Bridges which have significant amounts of night navigation are required to display navigation lights. The pattern of lights are as follows: piers or the margin of the channel are marked with fixed red lights; on fixed bridges, the center of the channel is marked with a fixed green light; on movable bridges, one or more lights on the movable section change from fixed red to fixed green when the bridge is opened. Some bridges also have fog signals or RACONS; those signals are listed in the Light List.

Due to a history of accidents involving vessels hitting bridges, the old regulations, which referred only to bridge lighting, have been expanded to include a means of signaling in daylight or fog, by radiotelephone. Part 117.24 prescribes a standard sign to show the bridge is equipped with a radiotelephone. Call signs and radio channels for drawbridges with radiotelephones are listed in Appendix A to Part 117.

Part 118.160 contains provisions for the installations of vertical clearance gauges on bridges. These gauges will inform vessel operators of the clearance available at bridges. The Eleventh Coast Guard District has required the installation of vertical gauges on movable bridges effective 1 May 1989.

The revised regulations also have added standards for the use of retroreflectors, daymarks, fog signals, radar reflectors, and racons to mark bridges.

The new amendments will not automatically require all bridges to have these devices installed. The lights and signals required to mark a bridge will be evaluated on a case-by-case basis.

Anyone having questions concerning these regulations should contact a Bridge Administrator at (415) 437-3514.

BRIDGE PERMIT APPLICATION PROCEDURE

A Bridge Permit Application Guide is available to assist Federal, state and local agencies and members of the general public in applying for a Coast Guard permit to construct a bridge or causeway across navigable waters of the United States. The guide is available upon request from the Bridge Branch.

maintained, sound or visual signals shall be used. Radiotelephone communications with drawbridge operators are to be on their working frequency if known. If their working frequency is unknown the preliminary call may be made on channel 16, the distress and calling frequency (156.800 MHz), for the purpose of determining what working frequency the bridge operator wishes to use. It should be noted that the exchange of signals for bridge openings are not authorized on channel 16 and all communications on this channel are to be as brief as possible.

VHF-FM RADIOTELEPHONES ON DRAWBRIDGES IN CALIFORNIA

<u>STATION</u>	<u>CALL SIGN</u>	<u>IDENTIFIER</u>	<u>WORKING CHANNEL</u>	<u>ADDITIONAL CHANNELS</u>
Carquinez Str. @ Martinez	KQ 7193	SPRR BR	13	16
Connection Slough @ Mandeville Is	KWH 225	CONNECTION SLOUGH BRIDGE	9	16,13
Ford Avenue @ Cerritos Channel	KVY 723	FORD RAILROAD BRIDGE	13	16
Schuyler F. Heim @ Cerritos Channel	KXJ 749	HEIM BRIDGE	13	16,10,9,8
Little Potato Slough @ Terminous	KSK 278	POTATO SLOUGH BRIDGE	9	16,10,13,18
Mokelumne River @ Isleton	KMJ 382	MOKELUMNE RIVER BRIDGE	9	16,10,13,18
Oakland Estuary @ Park Street	WHV 263	PARK STREET BRIDGE	9	16,13
*Oakland Estuary @ Fruitvale Ave	WHV 271	MILLER-SWEENEY BRIDGE	9	16,13
Oakland Estuary @ High Street	WHV 259	HIGH STREET BRIDGE	9	16,13
Napa River @ Vallejo	Military	MARE ISLAND CAUSEWAY	13	16,10,9,12,18
Sacramento River @ Rio Vista	KMJ 384	RIO VISTA BRIDGE	9	16,10,13,18
Sacramento River @ Isleton	KMJ 383	ISELTON BRIDGE	9	16,10,13,18
Sacramento River @ Walnut Grove	KMJ 491	WALNUT GROVE BRIDGE	9	16,10,13,18
Sacramento River @ Paintersville	KMJ 381	PAINTERSVILLE BRIDGE	9	16,10,13,18
Sacramento River @ Freeport	KMJ 490	FREEPORT BRIDGE	9	16,10,13,18
Sacramento River @ Sacramento	KDO 739	TOWER BRIDGE	9	16,10,13,18

* The operator of the Miller-Sweeney Bridge also operates the Fruitvale Ave. Railroad Bridge.

VHF-FM RADIOTELEPHONES ON DRAWBRIDGES IN CALIFORNIA (cont.)

<u>STATION</u>	<u>CALL SIGN</u>	<u>IDENTIFIER</u>	<u>WORKING CHANNEL</u>	<u>ADDITIONAL CHANNELS</u>
Sacramento River @ I Street	WHX 359	I STREET BRIDGE	9	16,13
San Francisco Bay @ San Francisco	KR 8864	SAN FRANCISCO DRAWBRIDGE	9	16,13,17,65
San Francisco Bay @ Dumbarton Pt	KQ 7191	DUMBARTON RAILROAD BRIDGE	9	16
San Leandro Bay @ Otis St	WHV 267	BAY FARM ISLAND BRIDGE	9	16,13
Steamboat Slough @ Grand Island	WHX 295	STEAMBOAT SLOUGH BRIDGE	9	10,13,16,18
3 Mile Slough near Rio Vista	KMJ 385	3 MILE SLOUGH	9	16,10,13,18

AUTHORIZED NOS NAUTICAL CHART SALES AGENTS CALIFORNIA

Alameda

Tradewind Instruments Ltd
2540 Blanding Ave
415-235-5726

Antioch

Antioch Marine Sale & Svc
625 W 3rd St
415-757-1606
Delta Canvas & Marine Prod.
End of Bridgehead Rd.
415-757-1606

Avalon

Catalina Cove & Camp Agency
Two Harbors General Store
213-832-4531

Avila Beach

Port San Luis Marine Supply
Pier 3
805-595-7214

Berkeley

The Map Center
2440 Bancroft Way
415-841-6277
University Ave Boat Supply
805 University Ave
415-845-4815

Bethel Island

Delta Sportsman
6131 Bethel Island Rd
415-684-2260
Marine Emporium Inc.
5993 Bethel Island Rd
415-684-2330

Bodega Bay

McCaughy Brothers Inc.
1850 Bay Flat Rd.
707 875 3935
The Tides Fish Market
835 Hwy 1
707-875-2777

Burbank

Geographa Map & Trv Bkstr
4000 Riverside Dr
818-848-1414

Byron

The Chandlery
5901 Marina Rd #10
415-634-6178

Campbell

Ship's Chandlery
1640 W Campbell Ave
408-866-0170

Canoga Park

Maps Etc/A Perry Supply Co
21912 Sherman Way
818-347-9160

Carnelian Bay

Sierra Boat Co Inc
5146 N Lake Blvd
916-546-2552

Coyote

Coyote Dsct Bait and Tackle Inc.
8215 Monterey Rd.
408-463-0711

Crescent City

Englund Marine Supply Co
201 Citizens Dock Rd
707-464-6230

Dana Point

Dana Book & Navigation Co
24402 Del Prado
714-661-3926
Kettenburg Marine
34467 Golden Lantern
714-496-3640
West Marine Products Inc
34235 Pacific Coast Hwy
408-728-2700

Eureka

Bucksport Sorting Goods
3650 S Broadway
707-442-1832
Northern Marine Hardware
2nd and E Sts
707-442-0745
Pro Sport Center
508 Myrtle Ave
707-443-6328

Eureka (cont.)

Woody Island Ship Shop
Wodly Isl Marina
601 Startare Dr.
707-442-7115

Fresno

Global Map Store
735 N Fulton
209-266-9831

Ft Bragg

Estes & Mc Danell Marine
32350 N Harbor Dr
707-964-7840

Fort Bragg

Marine N Harbor Dr.
707-964-3310
Nature Revealed
141 E Laurel St
707-964-5554

Half Moon Bay

Anchor Marine Co.
262 Princeton Ave
415-127-5260
Harbor fuel Dock
Pillar Point Harbor
Johnson Pier
415-726-4419

Huntington Beach

S and K Enterprises
5042 Edinger Ave
714-846-8890

Lodi

Tower Park Marina-Resort
14900 W Hwy 12
209-369-1041

Long Beach

Safe Navigation Inc
107 E 8th St
213-590-8744
Shoreline Marine Chandlery
429 Shoreline Village Dr
213-435-8682
West Marine Products Inc
251 Marina Dr
408-728-2700

Lynwood

Pacific Coast Map Service
12021 Long Beach Blvd
213-635-7265

Marina Del Ray

American Sailing Assoc
13922 Marquesas Way
213-822-7171
Bennet Marine Book and Video
730 Washington St.
213-821-3329
Ships Store Inc
14025 Panay Way
213-823-5574
West Marine Products Inc
4766 Admiralty Way
213-728-2700

Martinez

Diablo Marine Service
245 N Court St
415-372-0855
Conta Costa Marine
280 Arthur Rd.
415-372-0855
Martinez Marine Hardware
823 Marina Vista
415-372-7579

Monterey

Peninsula Boat Sales
256 Figueroa St
408-372-8666

Moss Landing

Moss Landing Marine Supply
Moss Lndng and Sandbold Rds
408-633-2133

Napa

Bookends Bookstore
1014 Coombs St
707-224-7455
Nappa Valley Marina
1200 Milton Rd
707-252-8011

Newport Beach

Balboa Marine Harbor
2700-B W Coast Hwy
714-548-3407
Boatswains Locker Inc.
101 Shipyard Way
714-642-6800
Dad's Marine Supply
2610 Avon St
714-646-5600
Kettenburg Marine
2700-B W Coast Hwy
714-548-3407
Minney's Ship Chandlery
2537 W Coast Hwy
213-548-4192
West Marine Products Inc
900 W Coast Hwy
714-645-1711

Novato

Boat Shop
7435 Redwood Blvd
415-892-1224

Oakland

West Marine Products
2200 Livingston St.
408-728-2700

Oceanside

Oceanside Marine Center Inc
1550 Harbor Cr N
619-722-1833
World of Maps
607 Mission Ave
619-967-7141

Orange

Longfin
4010 E Chapman #D
714-538-8010

Oxnard

Coast Chandlery
3600 Cabezone Way
805-985-0801
Pacific Compass & Nav Co
3201 S Victoria Ave
805-985-2364

Palo Alto

West Marine Products
850 San Antonio Rd.
408-728-2700

Pasadena

Pasadena Map Company
985 E Colorado Blvd
213-795-3626

Petaluma

McDonald Electronics
1382 N McDowell Blvd
707-664-0450

Pittsburg

Harris Yacht Harbor
100 Trojan Rd
415-687-8400

Point Arena

Double D Systems
415 School St Hwy 1
707-882-2746

Pleasant Hill

Hogan's Stores Inc
1500 Contra Costa Blvd
415-686-1985

Rancho Cordova

Foredeck
11373 Folsom Blvd
916-635-1932

Redondo Beach

Redondo Marine Hardware
1010 N Catalina Ave
213-376-0512

Redwood City

Al's Marine Inc
635 Bair Island Rd.
415-364-0288

Richmond

Whale Point Marine Supply
110 W Cutting Blvd
415-233-1988

Rio Vista
Delta Marine Yacht Harbor
100 Marina Dr
707-374-2315

Rodeo
The Lucky Strike Bait Shop
13 Pacific Ave
415-799-9070

South Lake Tahoe
Tahoe Keys Marina Chandlery
2435 Venice Dr
916-541-5022

South San Francisco
West Marine Products
608 Dubuque Ave
415-728-2700

Sacramento
California Surv and Drft Sup
4733 Auburn Blvd.
916-344-0232

Chanpion Map Corp.
Western Division
9550-F Micron Ave
916-366-6622

Gallen Maps
2341 Bell St.
916-489-2708

Hoig's Marine
901 Howe Ave
916-929-9651
Stockdale Marine & Nab Ctr
4730 Mrtle Ave
916-332-0775

San Diego
James and Joseph
2040 Harbor Island Dr
714-295-3705
Kettenburg Marine
2810 Carleton St
714-224-8211

Map Centre
2611 University Ave
619-291-3830
San Diego Marine Hardware
505 W G street
619-231-8334
West Marine Products Inc
1214 Rosecrans St
619-224-8222

San Francisco
Frank's Fishermans Supply
366 Jefferson St
415-775-1165
Maskell Marine Service
496 Jefferson St
415-771-5200

San Gabriel
Mason Map Service
553 W Las Tunas Dr
818-281-8757

San Jose
Maritime Electronics
1539 S Winchester Blvd
408-378-0400

San Pedro
West Marine Products
203 N Harbor Blvd
408-476-1900
Southwest Instrument Co
235 W 7th St
213-529-7800

San Rafael
Loch Lomond Marine Supply
100 Loch Lomond Dr
415-457-6777

Tom's Boat Maintenance
99 Loch Lomond Dr
415-258-0688
Western Boat Shop
101 3rd St
415-454-4177

Santa Barbara
Coast Chandlery Ltd
1 Breakwater
805-965-4538
Pacific Traveller's Supply
529 State St
805-963-4438

Santa Clara
Cape & Mc Phetres Inc
2931 El Camino Real
408-248-7844

Santa Cruz
Seaport Marine Center
333 Lake Ave
408-476-4200
Tom's Fisherman's Supply
2210 E Cliff Dr
408-476-2648
West Marine Products
2450 17th Ave
415-494-6660

Santa Monica
California Map Center
3211 Pico Blvd
213-829-7902

Sausalito
B C Navigation Center
475 Gate Five Rd
415-331-6513
Armchair Sailor Bk and Nav
42 Caledonia St
415-332-7505
West Marine Products
295 Harbor Dr.
408-728-2700

Seal Beach
Bahia Marine Hardware
714 Marina Dr
213-498-1846
Boatswain's Locker Inc.
10 Marina Dr
213-598-6611

Sonoma
Sportsmens Headquarters
18700 Sonoma Way
707-996-6299

South Lake Tahoe
Outdoorsman
2358 Lake Tahoe
916-541-1660

Stockton
Larson Marine Inc
1325 W Fremont St
209-465-5801
West Marine Products Inc
1810 W Field Ave
209-464-2922

Sunnyvale
Hunters Systems Company Inc.
1156-C Aster Ave
408-249-1314

Tahoe City
Tahoe Boat Company
700 N Lake Blvd
916-583-5561

Trinidad
Salty's Sporting Goods
Scenic and Main
707-677-3874

Vallejo
Brinkmans Marine Inc.
#1 Curtola Pky
707-642-7521
Yacht Masters
1 Harbor Way
707-554-2813
Vallejo Marine
2430 Sonoma Blvd
707-643-7179

Van Nuys
Pan American Navigation Sv
16934 Satcoy St
818-345-2744

Ventura
Beacon Marine Center
1198 Navigator Dr
805-644-4444
Coast Chandlery
3695 E Harbor Blvd
805-644-2044
Dunne's Marine
2409 E Harbor Blvd
805-644-2586
Southwest Parks and Mon Assc
Supt-Channel Island Natl Park
1901 Spinnaker Dr
602-622-1999

W Covina
A L S Map
610 N Azusa Ave
818-915-5165

Wilmington
Ken Enterprises Inc
824 W Pacific Coast Hwy
213-834-4575
Muller Marine
1000 E Anaheim St
213-830-2825

[illegible]

KEY: 24 = Bridgetender service 24 hrs/day

24C = Operates 24 hrs/day except for wkday rush hour closures from 7:30 - 8:30 a.m. and 3:45 - 5:45 p.m.

16C = Operates 6:30 a.m. - 10 p.m. except for wkday rush hour closures 6:30 - 7:30 a.m. and 3:45 - 4:45 p.m.

9C = Operates 8 a.m. - 5 p.m. daily. Closed from 9 p.m. to 5 a.m., 12 hrs advanced notice required for openings 5 - 8 a.m. and 5 - 9 p.m.

A72 = 72 hours advance notice required

A48 = 48 hours advance notice required

A24 = 24 hours advance notice required

A12 = 12 hours advance notice required

A6 = 6 hours advance notice required

A4 = 4 hours advance notice required

A2 = 2 hours advance notice required

A1 = 1 hour advance notice required

• Central contact point for advance notice is the Rio Vista Bridge (phone or radio) Tel. 707-374-2134; R/T Call station KPMJ 384 "Rio Vista Bridge" Frequencies - 156.45 Mhz, 156.80 Mhz

S16 = Summer bridgetender service 16 hrs/day (6 am - 10pm; May 1st to October 31st, annually)

S9 = Summer bridgetender service 8 hrs/day (8 am - 5 pm; July 1st to September 30th, annually)

S8 = Summer bridgetender service 8 hrs/day (9 am - 5pm; May 15th to September 15th, annually)

S8E = Summer bridgetender service 8 hrs/day (9 am - 5 pm; May 1st to October 31st, annually)

WB = Winter bridgetender service 8 hrs/day (9 am - 5pm; November 1st to April 30th, annually)

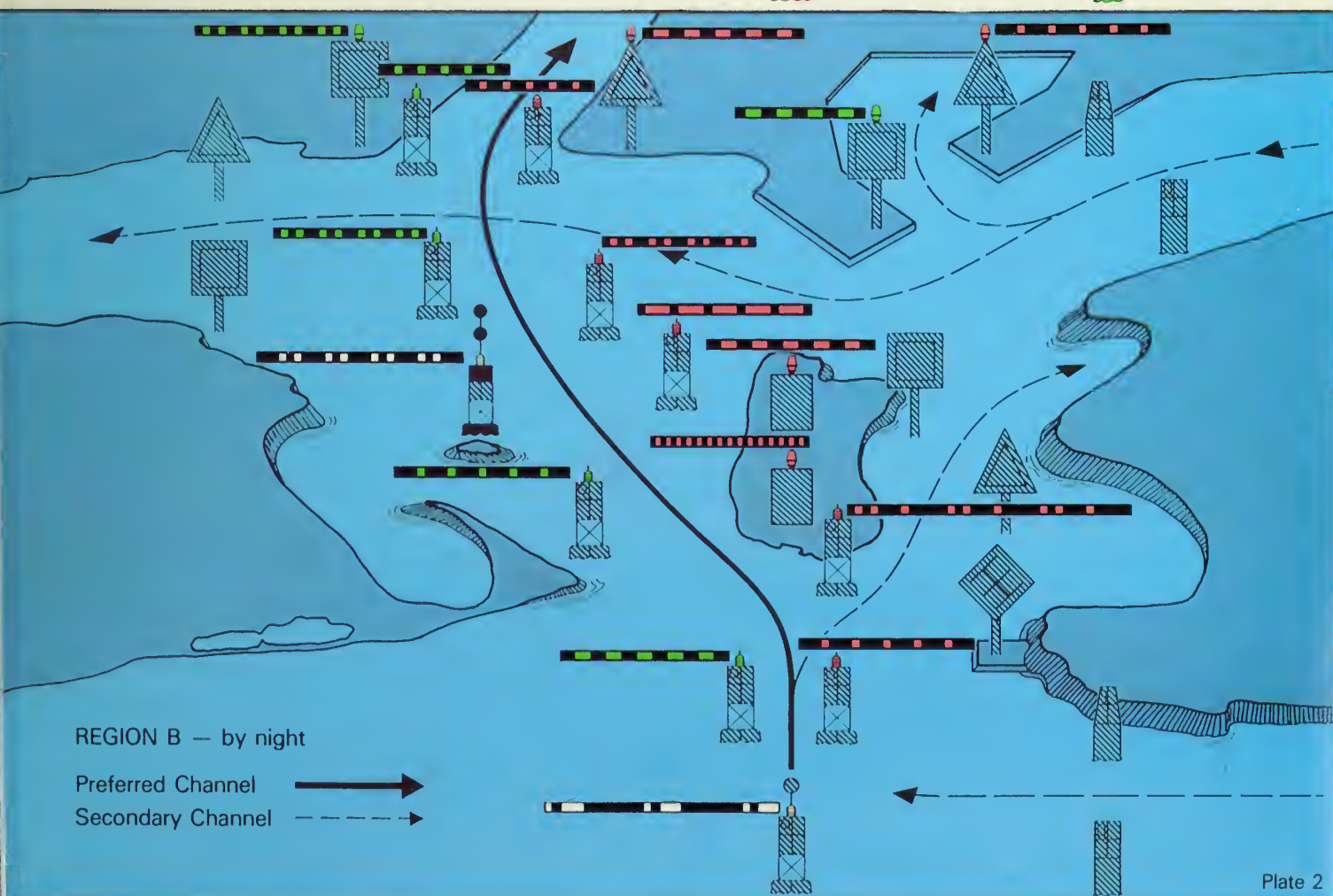
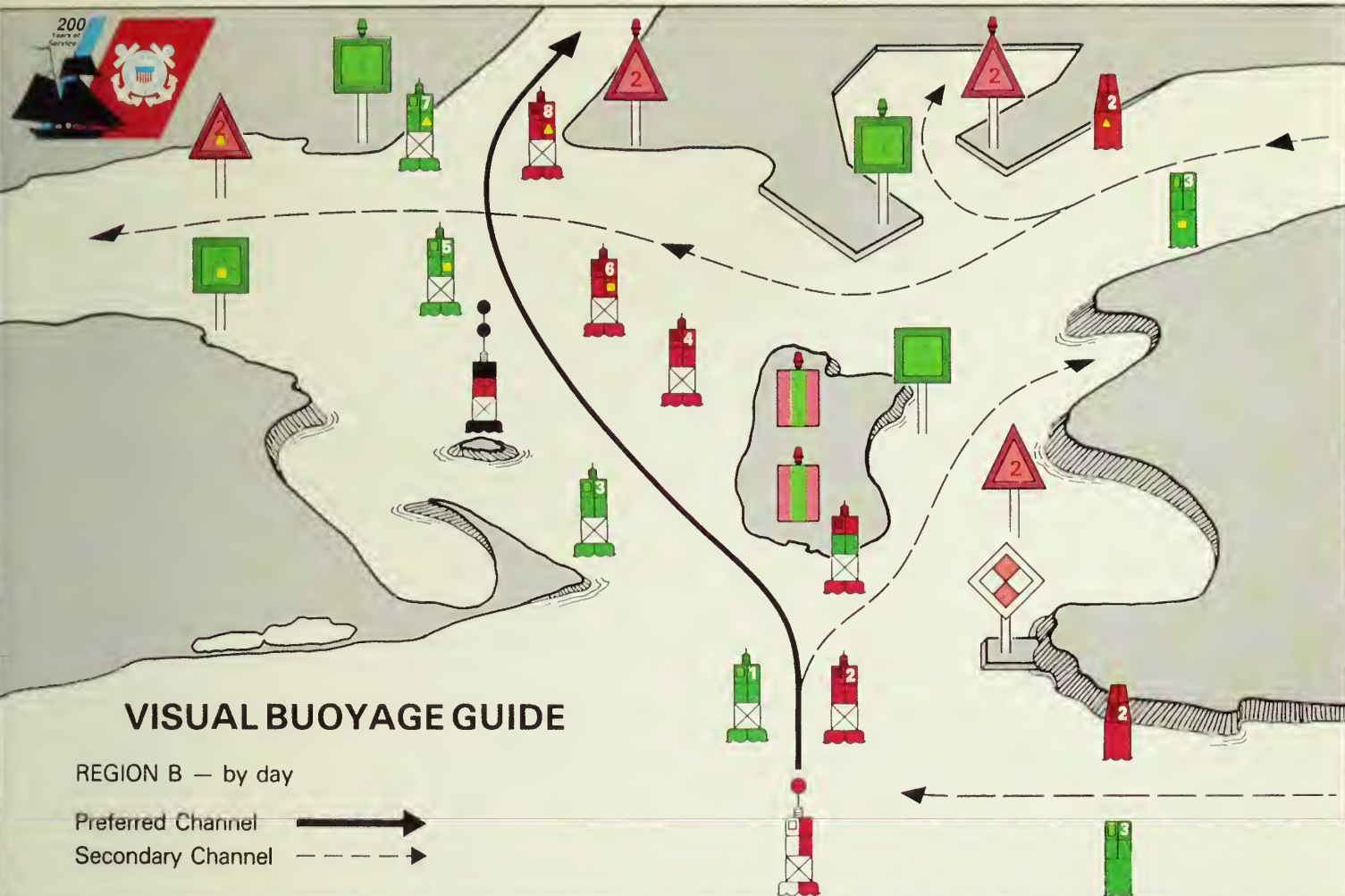
WBH = Winter bridgetender service 8 hrs/day (9 am - 5pm; Thursday thru Monday, September 16th to May 14th, annually)

CL = Closed (not required to open for the passage of vessels)

CG = Only required to open when directed by the Coast Guard

SM = Stands open except for the passage of trains or rail maintenance equipment

A4/A24 = 4 hours advance notice required 6 am - 6 pm
24 hrs advance notice required 6 pm - 6 am





San Diego Bay Channel Lighted Buoy 19 . . . on station and watching properly!



DEPARTMENT OF TRANSPORTATION
 UNITED STATES COAST GUARD
 Commander, 11th Coast Guard District (oan)
 400 Oceangate
 Long Beach, CA 90822-5399

 Official Business
 Penalty for Private Use, \$300

FIRST CLASS MAIL
 POSTAGE & FEES PAID
 UNITED STATES COAST GUARD
 PERMIT No. G-157

BEFORE YOU GET UNDERWAY . . .
 FILE A FLOAT PLAN AND LEAVE IT WITH SOMEONE YOU KNOW